The path of most resistance

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The path of most resistance

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General Introduction

In societies that are characterised by social inequality, belonging to groups is not always positive. While some groups are relatively well-off and advantaged, others are relatively disadvantaged, and this can have a profound impact on the lives of group members. Disadvantaged groups face poverty, reduced access to education, and poorer health outcomes (Creed, Hood, & Leung, 2012; Pickett & Wilkinson, 2010; Siegrist & Marmot, 2004; Wilkinson & Pickett, 2008). Moreover, disadvantaged groups often face considerable prejudice and discrimination: members of these groups are considered less valuable and less worthy than members of advantaged groups. The social groups to which we belong ("in-groups") form an important part of our identity, and as such the realisation that an in-group is devalued in this way can be a negative and threatening experience, leading to *social identity threat* (Branscombe, Ellemers, Spears, & Doosje, 1999; Breakwell, 1986). How group members respond to these experiences is the central question underlying many theories of intergroup relations. Crucially for this dissertation, however, social identity threat can arise as a result of very subtle cues, and can even occur outside of conscious awareness. How members of disadvantaged groups deal with such *implicit* social identity threat is an issue that has been neglected in existing theoretical frameworks. This dissertation addresses this question, and focuses specifically on the possibility of resistance against implicit social identity threat. Examining whether implicit social identity threat can be resisted will allow us to better understand resilience amongst members of disadvantaged groups in the face of subtle disadvantage and stereotyping.

In many Western societies, there is evidence that social devaluation of disadvantaged groups is becoming increasingly subtle (Pearson, Dovidio, & Gaertner, 2009; Swim, Aikin, Hall, & Hunter, 1995). For instance, changes in societal norms mean that it is considered increasingly unacceptable to express stereotypical or prejudicial attitudes explicitly (but see e.g. Betz & Johnson, 2004 on how political parties with populist, right-wing messages in Europe capitalize on this trend by "saying what we're not allowed to say" and rejecting political correctness). However, the fact that these attitudes are not expressed explicitly does not mean they have disappeared. Research has demonstrated that processes that contribute to social devaluation, such as stereotyping, can occur implicitly (Blair, 2002; Cañadas, Rodríguez-Bailón, Milliken, & Lupiáñez, 2013; Devine, 1989). That is, behaviour and cognition can be significantly biased without the either the "perpetrator" or the victim being consciously aware of it. Amongst the victims of these biases such

experiences can lead to implicit social identity threat: social identity threat that occurs *outside* of conscious awareness. Consider, for example, the experience of a woman who is overlooked for a promotion at work, and praise by a neighbour for her efforts in the home. While neither of these experiences is in itself sexist, at an implicit level they may convey information about her suitability for certain social roles, in line with social stereotypes.

Fortunately, a great deal of research has demonstrated that members of disadvantaged groups are resilient, and have a variety of strategies at their disposal to cope with social identity threat (Ellemers, Spears, & Doosje, 2002; Leach & Livingstone, 2015; Major & Eliezer, 2011). However, at the implicit level, social identity threat is more difficult to recognise and to address directly, and research suggests that this undermines resilience (Kray, Thompson, & Galinsky, 2001; Major, Quinton, & Schmader, 2003). Indeed, there is evidence that exposure to implicit stereotypes leads to stereotype-conformity (Chen & Bargh, 1997). When women were exposed to explicit gender stereotypes in a negotiation setting, they became angry and countered stereotypes by performing better than their male peers. However, when gender stereotypes were implicit, women performed *worse* than their male peers, in line with stereotypic expectations (Kray et al., 2001). Thus, previous research indicates that resilience to identity threat is possible to some degree, but as threat becomes more subtle, or even implicit, resilience is reduced.

This dissertation describes a line of research that examines the hypothesis that members of disadvantaged groups are nevertheless able to resist social identity threat, even when it occurs at the implicit level. This hypothesis is derived from research that has highlighted the sophisticated nature of implicit information processing. People do not merely perceive implicit information; they also evaluate and interpret it, for instance in terms of goal congruence (Glaser & Knowles, 2008). Likewise, there is evidence that responses to implicit information are affected by motivation (Glaser & Knowles, 2008; Moskowitz & Li, 2011). Such findings suggest that members of disadvantaged groups can cope with implicit social identity threat in active, motivated ways.

The five empirical chapters of this dissertation demonstrate that members of disadvantaged groups can indeed resist implicit social identity threat, and that resistance can take a number of different forms. As such, they show that members of disadvantaged groups are more resilient than previously thought. Before turning to the empirical chapters, though, this first chapter introduces the central concepts of this dissertation. Firstly, in the section on

intergroup relations, I[1] discuss the structure of disadvantage that characterises many Western societies, including our own, and describe processes through which inequality is brought about and maintained. Subsequently, I outline prominent theories of intergroup relations that have studied how members of disadvantaged groups perceive and deal with social inequality and group-based devaluation. I discuss evidence that perceptions of in-group devaluation can give rise to social identity threat, and then turn to resistance, describing strategies that can be used to resist social identity threat. I then outline evidence that social identity threat can also occur implicitly and consider whether such implicit social identity threat can be resisted and, if so, what form such resistance might take. Finally, I provide an outline of the empirical chapters of the dissertation, describing how each chapter contributes to the understanding of resistance to implicit social identity threat.

Intergroup inequality

In our own society, disadvantaged groups include many ethnic groups (Williams & Mohammed, 2009), women (Swim, Hyers, Cohen, & Ferguson, 2001), religious minorities (Strabac & Listhaug, 2008), the LGBTQI-community (Herek, 2007), the poor and the unemployed (Cozzarelli, Wilkinson, & Tagler, 2001), the lower educated (Kuppens, Spears, Manstead, Spruyt, & Easterbrook, 2017), the homeless (Cikara, Farnsworth, Harris, & Fiske, 2010), those suffering from mental illnesses (Corrigan & Watson, 2002), obese people (Crandall, 1994) and the elderly (T. D. Nelson, 2004). Though the precise nature of the inequality faced by each of these groups can differ substantially, what unites them is that, at a societal level, members of these groups are considered less valuable and less worthy than members of dominant groups. This devaluation is expressed through prejudice and discrimination towards people who are members of these groups (Crocker & Quinn, 2000; Major & Schmader, 2001). Prejudices are (usually negative) attitudes held about a person on the basis of their group membership, while discrimination is the tendency to act upon such beliefs (Dovidio, Hewstone, Glick, & Esses, 2010). For instance, prejudiced views of those with working-class backgrounds as less intelligent can lead to discrimination in the educational system: recent data from the Netherlands has shown that children who receive identical test scores are perceived as less intelligent by their teachers when they come from work-

[1] In this chapter I use the personal pronoun "I", but the research and ideas reported in this dissertation were developed in collaboration with my co-authors, Russell Spears, Toon Kuppens and Soledad de Lemus – as indicated by the use of "we" in subsequent chapters.

ing-class backgrounds compared to middle-class backgrounds (CBS, 2016).

Importantly, however, the devaluation of a group can be expressed through positive attitudes as well. This effect is illustrated in the literature on gender and benevolent sexism (e.g. "women are wonderful", Eagly & Mladinic, 1994). Benevolent sexist attitudes express views and behaviours towards women that are superficially positive, but ultimately reflect a patriarchal system in which women are seen as dependent on men. Examples of benevolent sexism include chivalrous behaviour such as opening doors for women, or offering to carry heavy items. Importantly, the positive views expressed towards women are typically reserved for those women who behave *in line with* patriarchal expectations (Glick & Fiske, 2001). Thus, even though this type of behaviour can stem from good intentions, it ultimately reinforces inequality and patriarchal group relations. However, the positive phrasing of these attitudes means that women are unlikely to object: while hostile forms of sexism motivate collective action, benevolent sexism undermines it (Becker & Wright, 2011). In fact, there is evidence that women may perceive benevolent sexism positively (Bohner, Ahlborn, & Steiner, 2010; Montañés, de Lemus, Moya, Bohner, & Megías, 2013; Moya, Glick, Exposito, de Lemus, & Hart, 2007). These findings on benevolent sexism thus demonstrate that positive attitudes can also contribute to intergroup inequality.

Once social inequality is established, there are many processes that maintain, reinforce and legitimise it. One major process by which inequality is maintained is stereotyping. Stereotypes attribute traits and characteristics to people based on their membership in certain social groups (Glick & Fiske, 2001). Importantly, a group's status often determines the stereotypes associated with them rather than the reverse (Hoffman & Hurst, 1990). That is, stereotypes ascribe valued traits to groups that are already dominant or high in status, and non-valued traits to low status groups (Ridgeway, 2001). In line with this reasoning, research on gender stereotypes has shown that, in cultures that value individualistic traits, men are seen as individualistic: men are stereotyped as more ambitious and self-reliant than women. Conversely, in cultures that value collectivistic traits (like many Asian cultures), men are seen as collectivistic: they are stereotyped as more sincere and helpful than women (Cuddy et al., 2015). This underscores that stereotypes ascribe traits to groups as a way of attributing higher social value to the advantaged group. A consequence of this process is that stereotypes *justify and legitimise*

social inequality, because they lead people to believe that inequality between groups results from *real* differences in the traits these groups possess, and that the groups who possess the most valued traits, are rightly considered higher in status (Hoffman & Hurst, 1990; Jost & Kay, 2005; Rudman & Glick, 2008; Tajfel, 1981). The power of this process lies in the fact that people typically perceive the causal relationship between a group's traits and social status *the other way around* from how the process in fact occurs. The reason for this is that traits are perceived as stable, and therefore *causal* factors for outcomes (e.g. "they are poor because they are lazy", Kressel & Uleman, 2015). This means that the inferences people make about the "why" of social relations often draw upon stereotypical traits and characteristics as legitimate and justifiable reasons for intergroup inequality.

In sum, relations between different social groups are often characterised by substantial inequality and devaluation, which is pervasive and structural. How the individuals who live within these systems are affected by and respond to social disadvantage, is the fundamental question underlying many theories of intergroup relations.

Theories of Intergroup Relations

Many theories of intergroup relations attempt to understand how members of disadvantaged groups are affected by and respond to social inequality, and they can be differentiated by how optimistic they are about the possibility for social change. Some theories are more pessimistic and focus on how intergroup inequality is maintained and reinforced, such as Social Dominance Theory (SDT, Sidanius & Pratto, 2001; Sidanius, Pratto, Van Laar, & Levin, 2004). SDT proposes that hierarchical relationships and inequality are maintained because people are psychologically orientated toward dominance and desire *un*equal group relations (i.e., their social dominance orientation; SDO). According to SDT social dominance is reproduced not only at the individual level, but also for instance through the organisation of societal institutions. This makes social inequalities difficult to change. A related argument suggests that many people tend to believe that the world in which they live is fair and just (Lerner, 1980), and as such are motivated to explain intergroup inequalities in ways that make them seem fair. Research has shown that those who report high belief in a just world respond more negatively to groups who violate such beliefs, such as innocent victims of crimes (Hafer, 2000). System Justification theory (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004) goes even

further and proposes that members of disadvantaged groups are inclined to *accept and defend* the inequality and devaluation they face, because they are motivated to see aspects of the overarching social system as good, fair, and legitimate.

At the other end of this spectrum are intergroup theories that are more optimistic, and focus on circumstances under which members of disadvantaged groups come to challenge inequality and devaluation, and ultimately achieve social change. On this view, social devaluation is a stressor and source of threat and will trigger coping responses, in line with appraisal theories of coping with stressors more generally (Lazarus & Folkman, 1991). For instance, Realistic Conflict Theory (RCT, Campbell, 1958; Sherif, Harvey, White, Hood, & Sherif, 1961) describes how intergroup relations become strained and problematic when groups compete for resources, and people will challenge intergroup relations when they conflict with the interests of the in-group. Relative Deprivation theory (RDT, Walker & Pettigrew, 1984) suggests that the tendency to challenge existing intergroup relations can also be inspired by a sense of *relative*, rather than absolute, deprivation. RDT proposes that people will challenge intergroup relations when they perceive that their group "has less" than what they ought to have, and that this perception is largely independent of the group's objective position. In RCT and RDT, the tendency to challenge intergroup relations arises directly out of perceptions of group conflict. Social Identity Theory (SIT, Tajfel & Turner, 1979) was formulated to complement this perspective. SIT argues that direct conflict or competition between groups is not always necessary to trigger the desire to challenge intergroup relations; it can also arise out of identity management concerns, such as the desire for positive group identity (Branscombe et al., 1999; Pickett & Brewer, 2001). According to SIT, unequal intergroup relations can threaten the social identity of disadvantaged group members, and motivate them to challenge intergroup inequality, as a means of re-establishing positive group identity.

All of the theories described here discuss how group members cope with the negative and threatening experience of social inequality. Some focus on tendencies to accept unequal intergroup relations, while others focus on resistance and social change. Crucially, however, none address how people cope when threat occurs outside of conscious awareness. In this dissertation I draw on SIT to examine responses to threat that occurs at the *implicit* level.

Social Identity Threat

According to SIT, when group members become aware that the in-group is disadvantaged compared to an out-group, this can lead them to experience *social identity threat:* a negative appraisal of one's social identity that results from the in-group being devalued or inferior (Branscombe et al., 1999; Breakwell, 1986). People may experience threat to social identity on the basis of incidental experiences, for instance, a sports fan may experience social identity threat when their favourite team loses to their rival (Wann & Grieve, 2005). However, social identity threat can also be chronic and a structural component of daily life. If a social group has chronically low status within the social system, its members are repeatedly confronted with this fact. SIT argues that such experiences of social identity threat can motivate members of disadvantaged groups to maintain positive social identity by *challenging, rejecting and resisting* the harmful social system.

Addressing social identity threat. In line with predictions by SIT, research has documented diverse strategies that members of disadvantaged groups can use to manage identity threat arising from social devaluation, broadly divided into categories of social mobility, social creativity and social competition (Ellemers, Wilke, & Van Knippenberg, 1993; Spears, Jetten, & Doosje, 2001; Tajfel & Turner, 1979). Social mobility strategies are individual strategies, in which individuals try to gain positive identities by leaving the original group and attempting to join a higher status group (Jackson, Sullivan, Harnish, & Hodge, 1996; Spears, Doosje, & Ellemers, 1997). Social creativity strategies are group-based strategies, including re-appraising the threatening information and trying to reinterpret it more positively ('we may be poor but we are happy', Becker, 2012; Glick & Fiske, 2001; Kay & Jost, 2003). Similarly, the experience of social identity threat can be reduced by allowing group members to affirm a positive aspect of group membership in another domain (Sherman, Kinias, Major, Kim, & Prenovost, 2007). Social competition strategies challenge identity threat more directly: the disadvantaged group tries to compete with the advantaged group to try to achieve social change or higher status. Two classic forms of social competition are collective action and intergroup bias. Collective action can take the form of demonstrations, or other actions in which group members work in together to attempt to achieve social change (van Zomeren, Leach, & Spears, 2012). Intergroup bias refers to the tendency to evaluate one's own group and its members more positively, and treat them more favourably, than members of out-groups (Brewer, 1999;

Hewstone, Rubin, & Willis, 2002). Such social competition strategies most closely resemble what in this dissertation is defined as "resistance".

Resistance. Resistance is defined here as a motivated response that counteracts threat to social identity. Many social competition strategies would fall under this definition of resistance, but resistance is also broader than social competition, because it allows for the possibility that one can confront social identity threat in ways that do not necessarily involve direct competition with the out-group. This is crucial because we will examine resistance in the implicit realm, and direct competition with out-group (e.g. collective action) is difficult to realize when considering the implicit domain. Social mobility strategies, such as leaving the group, do not constitute resistance by our definition. Even though social mobility might serve to *cope* with social identity threat, it does not *counteract or challenge* the threat but rather avoids it.

Responses that counteract social identity threat can include evaluative strategies such as in-group bias. Previous work has shown that, when the positivity of group membership is threatened, people can re-establish positive in-group identity by evaluating the in-group more favourably (Cadinu & Cerchioni, 2001; Oakes & Turner, 1980; Voci, 2006). Likewise, people can resist threats to social identity through behaviour. For instance, exposure to stereotypes can elicit behaviour that attempts to *disprove* stereotypes. Specifically, it has been shown that exposure to gender stereotypes motivates women to persist in counter-stereotypical domains, such as spatial reasoning (de Lemus, Spears, Lupiañez, Moya, & Bukowski, 2017) or a negotiation task (Kray et al., 2001). Likewise, Nussbaum and Steele (2007) show that African American students persisted at a difficult task when they were told that that it was diagnostic of academic ability (a domain where African American students are stereotyped). Additionally, it is worth noting that whether a particular response constitutes resistance can differ across circumstances. Leach and Livingstone (2015) argue that resistance should be seen as any response that helps members of disadvantaged groups to maintain positive identity in the face of devaluation, and as such resistance strategies can be tailored to a specific situation. Taken together, these findings show that the experience of social identity threat can lead to a variety of coping responses, and those that serve to directly counteract social identity threat are defined here as resistance.

Implicit identity threat

Overall, then, there is a great deal of evidence that members of disadvan-

taged groups are resilient in the face of social identity threat. At the same time, however, there is evidence that, in many Western societies, social devaluation of disadvantaged groups is becoming increasingly subtle, in part because changes in societal norms mean that it is often considered unacceptable to explicitly express prejudicial or stereotypical attitudes (Dovidio, Kawakami, & Beach, 2008; Sears, Van Laar, Carrillo, & Kosterman, 1997; Swim et al., 1995). However, the fact that explicit forms of prejudice and discrimination are perhaps less common does not mean that the processes underlying these effects have disappeared. Crucially, the processes that underlie social devaluation and inequality can take place outside of conscious awareness (Blair, 2002; Devine, 1989). Stereotyping, for instance, is deeply ingrained in the automatic stages of cognitive processing. This is illustrated by research on lexical processing which has shown that verbal expressions that violate stereotypes (the electrician – she) are processed in the same way as verbal expressions that violate semantic rules (the king - she) (Canal, Garnham, & Oakhill, 2015; Osterhout, Bersick, & McLaughlin, 1997). Thus, the processes that are at the core of social inequality continue to exist and shape our social interactions, even when we are not consciously aware of it (Swim et al., 1995). For instance, stereotypes of certain ethnic minorities being criminal may no longer be voiced explicitly, but people may still unconsciously clutch their belongings when a member of such a minority group passes them by. In such a case, cues of social devaluation are present at the implicit level.

When considering the options for resistance to such implicit cues of social devaluation, two conditions must be met. It is relevant to note here that these two conditions are similar to those of stress-and-coping models (Lazarus & Folkman, 1991). Firstly, people must appraise the implicit information as threatening (the “primary appraisal” in the stress-and-coping model) and secondly, people must have the resources to address that threat (the “secondary appraisal” in the stress-and-coping model). With regards to the first stage, Allport noted more than 50 years ago that people who belong to socially disadvantaged groups may become especially attentive and vigilant to cues that their social identity is discredited (Allport, 1954; Kaiser, Major, & Mccoy, 2004; Steele, Spencer, & Aronson, 2002). Crucially, it has been shown that people are able to pick up on devaluation cues that occur outside of conscious awareness (Kaiser, Vick, & Major, 2006), and such experiences of implicit social identity threat have been shown to lead to anxiety (Barreto & Ellemers, 2005) and reduced self-esteem (Major et al., 2003). Yet, studies have also demonstrated

that this is not equally true for all members of a disadvantaged group. The experience of implicit social identity threat may depend, for instance, on *identification with the group*. Those who are highly identified with the group find the group more important, are more concerned for the group's well-being and experience threat to the group more acutely (Spears et al., 1997)[2]. Such increased sensitivity to social identity threat also made people more likely to pick up on threat cues that are presented outside of conscious awareness (Kaiser et al., 2006). This suggests that those who are highly identified with the in-group are more susceptible to implicit social identity threat, because the intergroup context, and threat arising from it, is more salient to them. In sum, research has shown that members of disadvantaged groups can experience social identity threat at the implicit level, and that such experiences are intensified by factors like group identification.

Addressing implicit social identity threat. When we consider coping resources, the second requirement for resistance, it is interesting to note that, until now, the consensus has been that when social identity threat is implicit, there is little people can do to resist (Barreto, Ellemers, Scholten, & Smith, 2010; Kray et al., 2001; Major et al., 2003). Though many researchers recognise that threat can occur implicitly, they argue that the second stage in which threat is managed requires conscious effort, as demonstrated by findings that cognitive load hampers resistance (Martiny & Kessler, 2014). Put differently, previous research suggest that the rejection of threatening information is a conscious process, which means that the individual must become consciously aware of the threatening information before they can reject it. Thus, when threatening information is presented outside of conscious awareness, people are unable to resist that information and instead are forced to passively accept it.

Such a "passive" explanation of how implicit threat cues come to affect members of disadvantaged groups is supported by research showing that implicit threat often elicits conformity rather than resistance. For instance, after exposure to subtle or implicit gender stereotypes, women were more likely endorse stereotypical self-descriptions and to self-handicap, than after exposure to explicit gender stereotypes (Barreto, Ellemers, Cihangir, & Stroebe,

[2] Note that this likely depends to some extent on the *type* of threat. While high identifiers have been shown to be more sensitive to group devaluation (with which we are concerned in this dissertation), *low* identifiers may be more susceptible to *categorisation threat*, that is, being categorised as a member of a group to which one does not want to belong (Branscombe et al., 1999).

2009). Likewise, implicit stereotypes lead women to adopt more submissive bodily postures (de Lemus, Spears, & Moya, 2012), and request more dependency-oriented help (Shnabel, Bar-Anan, Kende, Bareket, & Lazar, 2015). Similarly, implicit stereotypes affect behaviour: interacting with White partners who hold implicit anti-Black biases had a detrimental effect on Black participants' academic performance (Holoien & Shelton, 2012). These findings indicate that implicit stereotypes function as "self-fulfilling prophecies" (Chen & Bargh, 1997; Snyder, Tanke, & Berscheid, 1977), such that individuals who are exposed to implicit stereotypes of their in-groups behave in ways that fit the stereotype. Based on these findings, then, it seems that when threatening information is presented implicitly, this elicits assimilation, acceptance and conformity.

Resistance to implicit identity threat

In this dissertation we contrast the passive view of responses to implicit identity threat with an active, motivated account, which suggests that disadvantaged groups are active participants in social structures (in line with critiques of "false consciousness", see Abercrombie, Hill, & Turner, 1983). This approach is supported by research that has highlighted the sophisticated nature of implicit information processing. Early on, Bargh's (1990) auto-motive model suggested that subtle cues from the social environment can implicitly activate goals and motivations, which can then run to completion outside of conscious awareness (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001; Cesario, Plaks, & Higgins, 2006). For instance, research has shown that implicitly triggering the motive to behave in egalitarian ways leads to reduced stereotype activation (Glaser & Knowles, 2008; Moskowitz, Salomon, & Taylor, 2000), highlighting that implicit information can trigger motivation which in turn affects cognition and behaviour, without need for conscious intervention (Moskowitz & Li, 2011). Applying the insights from this line of research to the current dissertation would suggest that if members of disadvantaged groups are motivated to maintain positive identity, and motivation can be triggered and affect responses implicitly, then resistance to implicit social identity threat should be possible. In this dissertation, I examine this issue.

The literature on implicit cognition, then, has provided some indication that resistance to implicit identity threat may indeed be possible. At the same time however, the fact remains that previous research studying this question has found little evidence for resistance against implicit social identity

threat. This discrepancy may be the result of the fact that previous research has mostly focused on explicit indicators of resistance. It is likely that such explicit outcome measures do rely on a degree of conscious evaluation. If we consider collective action, for instance, it seems unlikely that one would engage in collective action when they are not consciously aware of a threat. If we want to examine resistance to identity threat when conscious awareness is absent, it is likely that such resistance would be expressed through responses that do not rely on conscious awareness. That is, implicit identity threat is likely to be resisted through implicit routes.

Implicit resistance. Crucially, recent research has demonstrated that there are resistance responses that can be employed without conscious awareness (de Lemus, Spears, Bukowski, Moya, & Lupiáñez, 2013; Ramos et al., 2015). Such implicit resistance to social identity threat might be conceived of as functioning like resistance in the physical immune system (vanDellen, Campbell, Hoyle, & Bradfield, 2011), fighting disease without the individual's awareness or conscious intervention. For instance, women who are exposed to stereotypical gender roles (e.g., women in the kitchen, men in the office) were found to implicitly associate their in-group with counter-stereotypical attributes (de Lemus et al., 2013). Likewise, women associated their in-group with counter-stereotypical attributes after observing sexist interactions between men and women (Ramos et al., 2015). Additionally, there is evidence for implicit evaluative in-group bias following social identity threat, whereby participants associate their own in-group more readily with positive attributes after exposure to social identity threat (de Lemus et al., 2017). In this dissertation I examine whether such implicit resistance strategies can be employed to resist *when the identity threat also occurs at the implicit level.*

It is worthwhile to distinguish implicit resistance from other responses that can counteract implicit information, such as compensation or contrast effects. Resistance differs from compensation-related processes (Glaser & Kihlstrom, 2005; Moss-Racusin, Phelan, & Rudman, 2010), in that it occurs in response to self-relevant social threat, while compensation can occur following any negative event. That is, resistance to identity threat does not imply automatic contrast to any negative stimulus, but rather targeted contrast to those stimuli that are threatening to social identity. This motivational basis also distinguishes resistance from contrast effects, which are typically produced by cognitive or perceptual processes such as anchoring (Bless & Schwarz, 2010) or comparison (Mussweiler, 2003). Likewise, in the Just-Say-No para-

digm (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000), participants learn to counteract stereotypes through training. This mechanism is imposed by the experimenter, rather than being internally motivated.

Regarding the measurement of implicit resistance, the measures we use in the empirical chapters of this dissertation rely on reaction times. Participants are presented with a target stimulus, and are required to respond as quickly as possible. When the target requires a response that is in line with participants' attitudes, the response will be facilitated, resulting in shorter reaction times. In this way, measuring reaction times can provide insight into participants' attitudes towards certain stimuli, even those of which participants are not consciously aware. Implicit resistance would be evident from implicit attitudes or tendencies that counteract implicit social identity threat.

Dissertation outline

Across five empirical chapters[3], this dissertation aims to demonstrate that members of disadvantaged groups can resist implicit social identity threat. I examine resistance to implicit social identity threat in the context of gender identity (Chapters 2-4), national identity (Chapter 5), and regional identity (Chapter 6). The final chapter of this dissertation (Chapter 7) summarises the research findings of the five empirical chapters, and outlines conclusions and implications of the research conducted. The empirical chapters are summarised below.

Chapter 2. As a prelude to the central question of whether implicit threat to gender identity can be resisted (Chapters 3 and 4), Chapter 2 examines how women think about gender group membership. Specifically, we are interested in the factors that predict whether women perceive that their social group faces inequality and disadvantage. Results show that these perceptions are predicted by both feminist identification and identification with women more generally. Specifically, in Studies 2.1 we show that women's identification reflects attitudes towards the socially constructed meaning of group membership, while feminist identification reflects the belief women as a group are devalued in the larger social system. These identities have only a small positive correlation, and based on this finding we propose a taxonomy of four prototypical gender identity subgroups. In Study 2.2, we examine whether this taxonomy can predict resistance-type responses, such as moder-

[3] The empirical chapters of this dissertation (Chapters 2 to 6) were written as separate journal articles. As a result, these chapters may show some overlap with the introduction and with one another.

ate and radical collective action. Indeed, results showed that radical collective action on gender issues is endorsed most strongly by women who are highly identified with feminists, but not with the broader group of women ("distinctive feminists"). In Studies 2.3 and 2.4 we further show that this taxonomy predicts critical attitudes towards gender stereotypes. Using a community sample (Study 2.3) and a student sample (Study 2.4), we show that critical attitudes towards gender stereotypes are most prominent amongst distinctive feminists.

In sum, Chapter 2 showed that women's attitudes towards gender group membership are governed by two distinct identity dimensions: women's identification and feminist identification. Critical attitudes towards gender stereotypes, and endorsement of resistance strategies like radical collective action, are strongest amongst distinctive feminists. Subsequently, we examined resistance at the *implicit* level.

Chapters 3 & 4. In Chapters 3 and 4 we use the taxonomy developed in Chapter 2 to examine whether women can resist implicit social identity threat. Chapter 3 describes the first evidence for resistance to implicit social identity threat. Women were exposed to implicit associations reflecting gender stereotypes, or counter-stereotypes. Results show that responses to implicit stereotypes depended on feminist identification and women's identification: resistance occurred amongst distinctive feminists only. That is, those who were shown, in Chapter 2, to find gender stereotypes most problematic, were also found, in Chapter 3, to resist stereotypes when they are presented at the implicit level. Resistance was evident from an implicit in-group bias, whereby positive targets were associated with the in-group (women) more than the out-group (men). Moreover, there was evidence for a behavioural resistance strategy: distinctive feminists showed increased persistence in a counter-stereotypical, but not a stereotypical, performance domain. This suggests that implicit social identity threat arising from stereotypes motivates these women to prove their competence in a counter-stereotypical domain (math). Together, these studies show that resistance to implicit social identity threat can occur through both evaluative and behavioural responses.

Chapter 4 extends evidence from Chapter 3 by showing that resistance to implicit identity threat can also occur through out-group focused responses, such as out-group derogation, that is, harsher treatment of the out-group (in this case, men). To the extent that implicit stereotypes imply that men are valued over women, this could be resisted by *boosting* women, or by *down-*

grading men. Indeed, Chapter 3 showed evidence for the former strategy: distinctive feminists show implicit in-group favouritism following exposure to implicit stereotypes. In the current study, we examine whether implicit gender stereotypes can also be resisted through out-group derogation, that is, by downgrading men. We use a Moral Choice Dilemma paradigm, in which participants are faced with moral dilemmas in which hypothetically sacrificing the life of one individual (manipulated to be either female or male) can save the lives of a number of others. Across two studies, women who identify strongly with feminists, but not women, found it easier to sacrifice men after exposure to implicit stereotypes (compared to exposure to counter-stereotypes). As such, Chapter 4 shows evidence for out-group derogation as a strategy to resist implicit stereotypes, amongst women who are highly identified with feminists but not women.

Taken together, Chapters 3 and 4 showed that women can *resist* implicit social identity threat, through implicit in-group bias, out-group derogation, and persistence in counter-stereotypical performance domains.

Chapter 5. In Chapters 3 and 4 there was evidence that resistance to implicit stereotypes occurred specifically amongst those who interpreted stereotypes as most threatening to identity (distinctive feminists). In Chapter 5, we leave the context of gender identity behind, and turn to the context of national identity to *manipulate* the interpretation of stereotypes. In doing so, we examine how the interpretation of implicit stereotypes affects resistance, and expect that resistance will occur specifically when implicit stereotypes are threatening to identity. In this way, we hope, firstly, to replicate our findings on resistance in the context of national identity, and, secondly, to gain more insight in the role of implicit identity threat in resistance.

Chapter 5 describes two studies in the context of national identity in Spain. Above, we have argued that one important reason why stereotypes are threatening to identity is because of the role they play in legitimising the group's disadvantage. In the current Chapter, we therefore exposed participants to one of four different conditions: implicit in-group stereotypes, implicit reminders of intergroup inequality, implicit in-group stereotypes that *legitimise* intergroup inequality, or a control condition. We expect that resistance is most pronounced in the condition where implicit social identity threat is strongest, that is, when stereotypes legitimise intergroup inequality.

Indeed, results show that when implicit stereotypes legitimise intergroup inequality, resistance arises, in the form of implicit in-group bias, and implicit

out-group derogation. That is, Chapter 5 replicates the findings of Chapters 3 and 4 in the context of national identity. Moreover, Chapter 5 shows that resistance is triggered in response to implicit information that legitimises intergroup inequality, thereby providing further evidence for the role of implicit social identity threat as a trigger for resistance.

Chapter 6. In Chapter 6, we attempt to replicate findings of Chapter 5 in the context of regional identity in the Netherlands. Participants from the province of Groningen were exposed to implicit associations reflecting stereotypes that legitimise in-group disadvantage or a control condition. However, results of this study showed no evidence for implicit resistance to implicit identity threat. This absence of resistance is likely due to the limited salience of the intergroup context. Though preliminary, findings suggest that, if participants are not familiar with the context of threat in their daily lives, they do not build up resilience, and implicit forms of that threat are less likely to be resisted. This interpretation suggests an important role for previous exposure to identity threat as a factor that allows members of disadvantaged groups to resist implicit social identity threat. In sum, this chapter offers a cautionary note, illustrating that the salience of the intergroup context represents an important boundary condition for resistance to implicit identity threat.

2

"Why should I have to choose between being feminine or feminist?" A multiple identity approach to gender

Note: This chapter is based on van Breen, J.A., Spears, R., Kuppens, T., & de Lemus, S. (2017). A multiple identity approach to gender: Identification with women, identification with feminists, and their interaction.

Abstract

Across four studies, we examine multiple identities in the context of gender. We propose that women's attitudes towards gender group membership are governed by two orthogonal gender identities: women's identity and feminist identity. We argue that women's identity reflects attitudes towards the *content* society gives to group membership: what does it mean to be a woman in terms of traits, characteristics, and values? Feminist identity, on the other hand, reflects attitudes towards the social position of the group: what does it mean to be a woman in terms of status, power and influence? This approach results in four theoretical subgroups, based on different combinations of identification with women and feminists. A woman can be identified (1) with neither women nor feminists (non-identifier), (2) with women but not feminists (traditional identifier), (3) with both women and feminists (dual identifier), or (4) with feminists but not women (distinctive feminist identifier). In four studies, we examine the utility of this multiple identity approach in predicting attitudes towards gender group membership. Study 2.1 shows that women's identification reflects attitudes towards group characteristics, such as femininity and self-stereotyping, while feminist identification reflects attitudes towards the group's social position, such as perceived sexism. The two identities are largely independent. Thus, endorsing femininity does not preclude strong identification with feminists. Moreover, Studies 2.2-2.4 show that specific combinations of women's and feminist identification predict attitudes towards collective action and gender stereotypes. Distinctive feminists endorse more radical collective action (Study 2.2) and find gender stereotypes more problematic (Studies 2.3-2.4) than do other groups of women. By considering women's and feminist identification as multiple identities we aim to offer a new perspective on gender identity, and show how the multiple identity approach predicts distinct attitudes to gender issues.

Since the 1980s there has been increasing attention for the complexities of gender identity, acknowledging that, like many other social identities, gender has a strong cultural component, and is not a straightforward biological fact (Marecek, Crawford, & Popp, 2004; Unger, 1979). Here we examine women's attitudes towards gender group membership, and argue that attitudes towards gender group membership are governed by multiple identities: women's identity and feminist identity. We contrast this multiple identity approach with other notable multicomponent approaches to gender identity and argue that the multiple identity approach is simple, while allowing for some new nuances in gender identity compared to previous models. Importantly, this approach helps us understand why being feminine and feminist are not mutually exclusive.

We do not consider here the personal, social and biological factors that determine an individual's gender identity, but rather study women's attitudes towards the socially shared component of gender group membership. What does it mean to be a member of the social category of women? An important aspect of the reasoning we present here is that an individual is not entirely free to construct the meaning of group membership as they please. Instead, the meaning of group membership is constructed at the societal level and to a large extent socially shared (Crocker, 1999; Moscovici, 1988). We are interested in how people respond to the social construction of a group to which they belong. We believe that considering women's identity and feminist identity as separable gender identities can offer interesting new perspectives on attitudes towards gender group membership.

The multidimensional nature of gender identity is incorporated into many different models (Becker & Wagner, 2009; Cameron & Lalonde, 2001; Condor, 1986; Egan & Perry, 2001), and an important question arising from such approaches is how the dimensions combine and interact. Many models (Cameron & Lalonde, 2001; Condor, 1986; Henderson-King & Stewart, 1994) discuss evidence that high women's identification can be combined with different gender ideologies (e.g. traditional, progressive, feminist). However, if the gender dimensions are seen as independent, then this means that it should also be possible for the same (feminist) ideology to be combined with both high and low women's identification. Yet, few models discuss this option.

One recent influential model that *has* explicitly conceptualised gender identity as composed of two independent dimensions is the Gender Identi-

ty Model (GIM, Becker & Wagner, 2009). The GIM aims to explain endorsement of sexism and support for collective action, and distinguishes between (1) identity *content*, a preference for traditional versus progressive gender roles, and (2) identity *strength,* measured as identification with women. That is, though the GIM postulates two independent dimensions, only one of these dimensions is a content dimension (traditional versus progressive), while the other, women's identification, reflects identity *strength.* In the current studies we propose that identification with women not only reflects identity strength but also has implications for the content of gender identity. That is, our approach allows content as well as strength for both women's identity and feminist identity.

We suggest that the content associated with women's identity centres on group attributes: what does it mean to be a woman in terms of traits, interests and values? For instance, key group attributes include being warm and caring (Chen, Chen, & Shaw, 2004; Fiske, Cuddy, Glick, & Xu, 2002). Although identity content is socially shared to some degree, individuals can differ in the extent to which they accept or internalize society's view of the group, which is reflected in their degree of identification (Ellemers, Spears, & Doosje, 2002). There is evidence that those who identify strongly with their group are more likely to self-stereotype, and consider themselves more typical of the group (Leach et al., 2008; Spears et al., 1997; Spears et al., 2001; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Chen, Chen, and Shaw (2004) showed that, when asked to list 5 traits that are most typical of women as a group, the traits listed by high and low women's identifiers' were identical, providing evidence that this perception was socially shared. However, high women's identifiers were more likely than low women's identifiers to say that (positive) traits that defined the group also defined *themselves* (Chen et al., 2004). Based on these findings, we argue that women's identity is socially constructed around *group attributes*. Those who are highly identified with women place high importance on traits and characteristics that society considers gender-typical, which we expect to translate to increased tendencies to self-stereotype, and increased perceptions of femininity, compared to low women's identifiers.

Alongside the characteristics associated with the group, the meaning of group membership also includes the place of the group within the larger social system (Livingstone, Spears, & Manstead, 2009). What does it mean to be a woman in terms of status, power and social (in)equality? We argue

that such (ideological) attitudes are reflected in *feminist identity*. Previous research supports the notion that feminist identity is a politicized identity that concerns itself with women's social position or status, and relations with other groups, notably men. For instance, feminist identity is related to increased perceptions of sexism in society (Henderson-King & Stewart, 1994), discontent with current power distributions and the status quo (Reid & Purcell, 2004), and increased involvement in collective action (Liss, Crawford, & Popp, 2004; J. A. Nelson et al., 2008; Yoder, Tobias, & Snell, 2011). Thus, the content of feminist identity is socially constructed around disapproval of the disadvantaged social position of women as a group. An individual's degree of identification with feminists reflects their commitment to this identity. High feminist identifiers have internalized the values of feminism, reject the gender status quo, and consider women to be disadvantaged in comparison to men.

In this chapter, then, we propose that women's identity and feminist identity reflect attitudes towards different components of the social construction of gender. If we think of women's identity as relating to *what the group is*, then we can think of feminist identity as relating to *how the group is doing* in relation to other groups, notably men. Identification with each of these identities reflects the extent to which a person has accepted and internalized the content associated with that identity. In line with the notion that women's and feminist identity are separable gender identities, previous research has found that the correlation between them is very small (Roy, Weibust, & Miller, 2007).

One benefit of allowing content for both identities is that different combinations of the identities allow for additional nuances in the resulting gender identity combinations. For instance, this perspective allows for high identification with the gender group, without assuming that this will necessarily lead to politicization. Relatedly, feminist identifiers may differ in their identification with women, which we expect to translate (*inter alia*) to differences in the importance they place on "femininity". Thus, our multiple identities approach explicitly allows for the possibility that femininity (related to women's identification) could co-exist with feminist identity. Such a distinction in the importance feminist identifiers place on femininity is supported by the gender literature and in the feminist movement: Some branches of feminism emphasize femininity as a domain of positive distinction from men (e.g. feminism of difference, Gilligan, 1977), while others downplay femininity (Butler,

2002). Thus, in this approach femininity and feminist identification are not necessarily mutually exclusive.

Several theorists have found it helpful to discuss the possibility of gender identity "subgroups" (Becker & Wagner, 2009; Condor, 1986; Gurin & Markus, 1989) to clarify how multiple identities can combine. That is, these subgroups address the question "how do the identities relate to one another?" In our approach, the first subgroup is composed of those who do not identify with either women or feminists ("non-identifiers"). Non-identifiers navigate gender group membership by giving priority to social identities *outside* the gender context, as they dislike being viewed in terms of gender (Barreto et al., 2010). Secondly, there are those who identify strongly with women but not feminists ("traditional women"). Traditional women focus on women's identity and value typically female gender roles, but they and disavow feminist concerns about the social position of women. Moreover, there are two feminist subgroups: those who are highly identified with feminists *and* women (dual women-feminist identifiers, or "dual identifiers" for short), and those who are highly identified with feminism, *but not* women (distinctive feminist identifiers or "distinctive feminists" for short). Dual identifiers can be described as preferring integrative identity management strategies that unite their commitment to women as a group with their commitment to feminism. For instance, they may be willing to take on leadership positions, but prefer more feminine styles when they do so (Olsson & Walker, 2004). Distinctive feminists, on the other hand, navigate gender group membership by giving priority to feminist identity over women's identity. For instance, they may disavow feminine beauty ideals because they perceive them as contributing to women's objectification (Murnen & Smolak, 2009). It is important to note that even though "distinctive feminists" do not identify highly with women, this does not mean that they are "anti-women". Rather, they disavow the (current) *social construction* of the group. Research has shown that radical members of social groups may come to experience a degree of dis-identification with their wider group, when they realise that their perception of the group is not shared by others. As a result, they may experience lower levels of group identification, while at the same time being strongly committed to the group's interests (Becker, Tausch, Spears, & Christ, 2011; Cichocka, De Zavala, Kofta, & Rozum, 2013). In sum, the subgroups can be thought of as reflecting different strategies

for managing multiple gender identities. Some subgroups manage their multiple identities by prioritising one identity over the other (traditional women; distinctive feminists) while others seek to integrate the identities (dual identifiers).

A further consequence of considering women's and feminist identity as multiple gender identities is that they may interact in predicting attitudes towards certain gender issues. Such interactions are likely to occur when an issue relates to attitudes towards group characteristics *and* group relations. In such circumstances, feminist identity and women's identity may have opposing or conflicting effects. For instance, radical collective action aims to improve the social position of women, and should therefore be positively related to feminist identity. However, radical collective action may also be negatively related to women's identity, to the extent that it is considered gender-atypical behavior for women (Eagly & Steffen, 1986; Hercus, 1999). That is, feminist identification and women's identification may have opposing effects on collective action. Likewise, gender stereotypes reflect information on what is considered "gender-typical" behavior and differentiation from outgroups (Brewer, 1991; Mlicki & Ellemers, 1996), and their endorsement should therefore be positively related to women's identification. At the same time, however, gender stereotypes are often used to legitimise the intergroup status quo (Jost & Kay, 2005; Rudman & Glick, 2008), and as such stereotype endorsement may be negatively related to feminist identity.

In sum, in the current paper we propose a multiple identities approach to gender. Importantly, this approach allows both women's and feminist identity to reflect content, while keeping a simple 2-factor structure. In Study 1, we examine the hypothesis that identification with women and identification with feminists represent separable dimensions of gender identity. We expect that identification with women predicts attitudes towards group characteristics (e.g., femininity) and identification with feminists predicts attitudes towards the social position of the group (e.g., gender inequality). In Studies 2-4, we examine the utility of this multiple identities approach in predicting differences in gender attitudes. Specifically, we expect that identification with women and identification with feminists interact in predicting support for collective action and perceptions of gender stereotypes. All studies reported here were approved by the relevant ethical committees, and conducted in accordance with the Helsinki declaration.

Study 2.1

In the first study we examine the central predictions of the multiple identities approach. We expect that feminist identity and women's identity will be relatively independent (i.e. not, or only weakly correlated). Secondly, we expect that identification with feminists will predict views regarding social relations, such as gender equality, and identification with women will predict views on group characteristics, such as perceived femininity.

Method

Participants. Ninety-one female students from the University of Groningen participated in exchange for course credit. The mean age was 20.8 years, ranging from 18 to 48. The majority of participants were German (52.7%) or Dutch (33%). The remaining 13.2% indicated another nationality, with 2.2% indicating non-Western nationalities.

In this study, we wanted to be able to detect expected effects of a small-to-medium size. The stopping rule used during data collection was to continue collecting data until the sample was large enough to detect effects of the expected size. With this sample we are able to detect small-to-medium effect sizes ($d \approx 0.17$) at a power of $1\text{-}\beta = 0.80$ (Faul, Erdfelder, Lang, & Buchner, 2007).

Measures. Each of the questionnaires included in this study used 7-point Likert scales, ranging from "not at all" to "very much", with the exception of the self-identification measure, which was categorical.

Identification with women and feminists. Women's identity was measured by identification with women as a group (4 items; $\alpha = 0.77$) adapted from Doosje, Ellemers, & Spears (1995; also see de Lemus, Bukowski, Spears, & Telga, 2015): I identify with this group; I have strong ties with this group; This group is an important part of my self-image; Being a member of this group is an important part of how I see myself. These items are easily cast in terms of feminism, allowing us to measure feminist identification and women's identification with the same items. Feminist identity was measured by identification with feminists. The scale consisted of the same items as the scale for women's identification, substituting the word "women" for "feminists" (4 items, $\alpha = 0.94$).

Attitudes to group characteristics. We included measures of perceived femininity of the self, and the Leach identification scale to measure attitudes towards group characteristics.

Leach identification scale. We included the Multidimensional Identifica-

tion measure (Leach et al., 2008, α=0.888), which is composed of five subscales: centrality of group membership, satisfaction with group membership, solidarity with the group, perceived homogeneity of the group and self-stereotyping. Some items of the centrality subscale were also present in the measure of women's identification. Those items were not repeated, and therefore the centrality subscale is not analysed separately. The subscale that is of central interest as a predictor of women's attitudes to group characteristics is self-stereotyping.

Perceived femininity. Two items measured perceived femininity of the self: "I am a feminine woman" and "I enjoy doing things that are considered typically feminine" (Leaper & Van, 2008, α=0.69).

Attitudes to group position. Attitudes towards the social position of women as a group were measured by perceived disadvantage faced by women, the Ambivalent Sexism scale, the Modern Sexism scale, and a scale of attitudes towards the feminist movement.

Perceived Disadvantage. Three items (α=0.65, adapted from Cameron & Lalonde, 2001) were used to create a "perceived disadvantage" scale. These items were "I believe that women are disadvantaged compared to men in today's society", "If we do nothing, women will continue to be disadvantaged compared to men" and "I have experienced sexism in my daily life".

Ambivalent sexism scale. The ambivalent sexism scale (Glick & Fiske, 1996) consists of the subscales hostile sexism (11 items, α=0.92), and benevolent sexism (11 items, α=0.89).

Modern Sexism scale. The extent to which people perceive sexism in society was measured by the modern sexism scale (Swim et al., 1995) consisting of 8 items (α=0.82).

Attitudes to the feminist movement. The Attitudes to the Feminist movement Scale (Fassinger, 1994) assesses attitudes towards feminism with items such as "Feminist principles should be adopted everywhere". The scale consists of 10 items (α=0.74).

Self-identification. The final question asked participants to self-identify as a non-traditional woman, a traditional woman, a feminist or "I don't know" (Cameron & Lalonde, 2001; Gurin & Markus, 1989). This measure was included to distinguish issues related to labelling as a feminist, from issues related to the content of attitudes (Zucker & Bay-Cheng, 2010).

Procedure. This study was conducted using Qualtrics. At the start of the questionnaire, participants provided informed consent and reported demo-

graphic information (including gender). Scales were presented in the order described above, items within scales were randomized. It took participants an average of 20 minutes to complete the study. At the end of the study, participants read a debriefing, and were thanked for their participation.

Analysis. The data were analysed with ANOVA models in which women's identification, feminist identification, and their interaction were entered simultaneously. Correlation tables can be found in the supplementary materials.

Results

Identification with women and feminists. On average women identified strongly with women (M=5.71, SD=0.76; 7-point scale), while identification with feminism was substantially lower (M=3.39, SD=1.39; 7-point scale). The correlation between women's identification and feminist identification was small (r=0.18, p=0.1), indicating that feminist identity and women's identity are interpreted as distinct identities.

Having established that women's identification and feminist identification represent distinct identities, we examine the meaning of these identities in more detail.

Attitudes predicted by women's identification. Women's identification was expected to predict attitudes towards group characteristics. As expected, then, women's identification predicted perceived femininity of the self (β=0.64, $F(1,88)$=54.74, p<0.001), such that those who identified highly with women felt more feminine. Women's identification also predicted the self-stereotyping and satisfaction subscales of the Leach et al. (2008) identification scale. Those who identified more strongly with women were more likely to self-stereotype (β=0.47, $F(1,88)$=23.13, p<0.001) and more satisfied with group membership (β=0.55, $F(1,88)$=34.67, p<0.001).

Attitudes predicted by feminist identification. Feminist identification was expected to predict attitudes related to the group's social position. Indeed, feminist identification predicted modern sexism (β=0.32, $F(1,88)$=8.741, p=0.004), so that higher feminist identification was related to increased perceptions of sexism in society. Likewise, perceived disadvantage of women was predicted by feminist identification (β=0.43, $F(1,88)$=18.79, p<0.001): higher feminist identifiers perceived more disadvantage for women. Hostile sexism, but not benevolent sexism, was predicted by feminist identification, (β=-0.240, $F(1,88)$=4.92, p=0.029), such that higher feminist identifiers endorsed less hostile sexism. Finally, as would be expected, feminist identification

predicted more positive attitudes to feminism, β=0.48, F(1,88)=25.24, p<0.001).

Interactions and additive effects. Solidarity with the group was predicted by both feminist identification (β=0.29, F(1,88)=12.11, p<0.001) and women's identification (β=0.55, F(1,88)=44.22, p<0.001). These additive effects show that solidarity with women as a group is highest amongst the dual identifiers. There was no evidence for interactive effects of women's and feminist identification (F<1).

Additional measures. The measure of self-report identification showed that half of the participants identified themselves as non-traditional women, 18.2% indicated that they thought of themselves as traditional women, only a very small percentage (4.5%) identified as feminists, and 27.3% indicated that they did not know. Thus, more than a quarter of women could not or would not classify themselves. Although the percentage of women explicitly identifying as feminists was very small (4.5%), feminist identification distinguished those who self-labelled as feminists from those who did not (χ^2(3)=13.52, p=0.004). Importantly, attitudes towards gender issues (disadvantage faced by women, modern sexism, and hostile and benevolent sexism) could not reliably predict whether an individual labelled themselves as feminist or not (Wald's Z-values<1.38, ps>0.24). That is, correspondence between categorical self-identification and attitudes towards gender issues is limited, confirming the discrepancy noted by previous work (Zucker & Bay-Cheng, 2010).

Discussion

In this study, feminist identification and women's identification showed only a small correlation (consistent with Roy et al., 2007). Moreover, there was evidence that women's identification correlates with attitudes towards group characteristics, and feminist identification correlates with attitudes to the group's social position. These findings support predictions of the multiple identities approach which permits content for both identities. The difference between them is the type of content they incorporate.

Results of this study confirmed the relative independence of the two identities, suggesting that femininity and feminist identity can exist alongside one another, a pattern represented in the subgroup of dual identifiers. The data presented here suggest that this group is characterized by a perception of women's disadvantage and inequality, while at the same time they feel quite feminine and are satisfied with what it typically means to be a woman. Of the four subgroups, the dual identifiers also showed the highest solidarity with

women. At first sight, the combination between satisfaction with femininity and perceptions of disadvantage may seem contradictory. However, these concerns may be reconciled by a desire to accord more status and value to typically feminine attributes, tasks and interests: maintaining a focus on femininity, while at the same time resolving disadvantage. In fact, it could be argued that if feminism implies defending the notion that femininity is not inferior to masculinity, then feminism does not undermine femininity, but rather affirms it.

It is worth noting that in this study, only a very small number of women (4%) self-labelled as feminists. That is, as previous research demonstrated, participants were reluctant to label themselves as feminists (Aronson, 2003; Zucker & Bay-Cheng, 2010). Importantly, these findings indicate that, in this study, continuous identification with women and feminists are better predictors of attitudes to gender issues than categorical self-identification.

Results of Study 2.1 suggested a relatively clear-cut division of attitudes as either relating to group characteristics *or* the group's social position. However, many gender issues are more complex than this, and have implications for group characteristics as well as the group's social position. In such a case, we may expect both identification with women and identification with feminists to play a role in determining attitudes to such an issue, through additive or interactive effects. Studies 2-4 further explore the utility of the multiple identities approach in predicting attitudes to gender issues that may relate to concern for group characteristics as well as concern for the group's social position.

Study 2.2

In Study 2.2, we examine the utility of the multiple identity approach in predicting attitudes to gender issues that have a bearing both on concern for group characteristics and the group's social position, focusing specifically on collective action. Collective action is aimed at confronting disadvantage and producing social change (Van Zomeren & Iyer, 2009), and in the current study we distinguish between radical and moderate forms of collective action (Tausch et al., 2011). In the context of gender, it has been shown that feminist identification has a positive relationship with collective action (Liss et al., 2004; J. A. Nelson et al., 2008; Yoder et al., 2011). As feminist identifiers perceive that women are disadvantaged in society, they wish to change the status quo. However, as the multiple identities approach distinguishes differ-

ent "types" of feminist identifiers (depending on identification with women), it is worthwhile to consider effects of women's identification in addition to effects of feminist identification.

When considering women's identification, there is reason to expect that identification with women will not have a strong relationship with collective action, as collective action does not relate directly to group characteristics. Thus, we expect that high women's identification does not necessarily lead to increased support for collective action (Henderson-King & Stewart, 1994). When considering radical collective action, we may even expect that women's identification will have a *negative* effect on support for this type of action. Radical collective action is often defined as collective actions that involve some degree of aggression, anger, or even violence (Tausch et al., 2011), traits that are oppositional to social definitions of femininity (Eagly & Steffen, 1986; Fiske et al., 2002; Hercus, 1999).

In addition to these additive effects, we might also expect an interaction between women's identification and feminist identification when considering radical collective action.

Specifically, when considering radical collective action, dual identifiers' attachment to femininity and tendency to self-stereotype may weaken the effect that feminist identification has on their support for radical action. Amongst distinctive feminists, on the other hand, the effect of feminist identification on support for radical action may be *reinforced* by low women's identification. In short, support for radical collective action may be affected by an interaction between women's and feminist identification, such that support for radical collective action is higher amongst distinctive feminists than amongst other women. Study 2.2 examines this possibility.

Method

Participants. Female participants (N=121) were recruited amongst students of the University of Granada, Spain. Age ranged from 18 years old to 50 years old, with an average of 19.75. Participants took part in exchange for course credit.

We expected effects of a small-to-medium size, and with this sample we are able to detect such small-to-medium effect sizes ($d \approx 0.13$) at a power of $1-\beta=0.80$ (Faul, Erdfelder, Lang, & Buchner, 2007). The stopping rule used during data collection was to continue collecting data until the sample was large enough to detect effects of the expected size.

Design. Data for this study were collected as part of a larger experiment (de Lemus et al., 2017) with a 2 x 2 between-participants design. The salience of (counter)stereotypical gender roles was manipulated through pictures showing men and women in (counter)stereotypical contexts, such as a kitchen and an office setting.

Measures. A complete list of the dependent variables included during data collection can be found in the supplementary materials. Below we describe only the measures of interest for this study.

Women's and feminist identification. Women's and feminist identification (were measured in the same way as in Study 2.1 (4 items each; α=0.79 and α=0.95 respectively).

Support for collective action. Support for moderate collective action was measured by 6 items (α=0.68), focusing on actions like signing a petition, joining a peaceful public demonstration, or lobbying for women's rights. Support for radical collective action was measured with 5 items (α=0.77), focusing on actions like attacks on sexist institutions, blackmailing, or hacking into e-mail accounts (Becker et al., 2012) . Support for each action was rated on an 11-point scale from not at all to very much. All items referred to the action being taken in order to "reduce gender inequality". Thus, it was clear that the objective of both types of action was the same, only the form differed.

Perceived efficacy. Perceived efficacy of women as a group was measured with three items (α=0.87) adapted from van Zomeren, Spears, and Leach (2008). This was used as a control variable in the analyses.

Procedure. Participants provided informed consent, were assigned to one of four conditions, and completed the manipulation. Participants then completed a paper-and-pencil questionnaire, with the measures of central interest, feminist identification, women's identification and support for collective action at the end. After completing all measures, participants read a funnelled debriefing and were thanked for their participation.

Preliminary analyses. Moderate and radical collective action were weakly but significantly related (r=0.19, p=0.021). Support for moderate action was higher (M = 8.280) than support for radical action (M = 2.46). Because the measures were taken after a manipulation we examined the effect of the manipulations on women's identification, feminist identification and collective action intentions, but no effects were found (Fs<1, ps>0.1)**.** Both women's identification (F(1,123)=11.80, p< 0.001) and feminist identification

($F(1,123)=14.51$, $p< 0.001$) were related to perceived efficacy of the group. Perceived efficacy of the group in turn was related to intentions towards moderate collective action ($F(1,123)=31.36$, $p<0.001$). Therefore, it is controlled for in the analyses presented below. Further predictors were women's identification, feminist identification, and their interaction. The correlation table can be found in the supplementary materials.

Results

Identification with women and feminists. As in Study 2.1, participants identified strongly with women as a group ($M=5.86$; $SD=0.88$), and less with feminists ($M=3.63$; $SD=1.59$). Again, feminist identification and women's identification were not significantly correlated ($r=0.12$, $p=0.19$).

Collective action. Feminist identification predicted support for moderate action ($\beta=0.21$, $F(1,123)=7.44$, $p=0.007$): those who identified more strongly with feminists were more likely to support moderate collective action.

Radical collective action showed additive effects of women's and feminist identification. Feminist identification positively predicted support for radical collective action ($\beta=0.35$, $F(1,123)=16.12$, $p<0.001$), while women's identification *negatively* predicted support for radical action ($\beta=-0.34$, $F(1,120)=4.83$, $p=0.030$). The interaction between women's identification and feminist identification was not significant ($F<1.35$, $p>0.21$). Taken together, these effects illustrate that support for radical collective action is highest amongst the distinctive feminists, who are highly identified with feminists, but not with women. However, this pattern was the result of additive effects rather than an interaction.

Discussion

This study replicates findings from Study 2.1 that women's identity and feminist identity constitute separable gender identities. Additionally, results from this study show that those who identify more strongly with feminists are more likely to support both moderate and radical collective action strategies aimed at increasing equality between the groups. This is in line with results from Study 2.1, which suggests that feminist identification is related to attitudes towards the group's social position (relative status, inequality, sexism). Women's identification on the other hand did not predict support for moderate collective action, and *negatively* predicted support for radical collective action. This shows that high women's identification does not auto-

matically translate to increased support for collective action.

If we think of these results in terms of the different subgroups of gender identifiers, we see that the distinctive feminists behave as we would expect feminist identifiers to behave: they show high support for moderate collective action, and also show the highest degree of support for radical collective action. Dual identifiers on the other hand, support moderate action, but not radical action. That is, even though they are high feminist identifiers, they do not support all kinds of collective action.

Taken together, the results of Study 2.2 shows that support for moderate collective action increases with feminist identification, but is not related to women's identification. Support for radical collective action is highest amongst distinctive feminists, due to additive effects of women's and feminist identification. As such, these findings provide a first indication that the multiple identity approach can predict differences in women's gender attitudes.

Study 2.3

Study 2.3 examines another domain expected to relate to both women's identification and feminist identification: gender stereotypes. Stereotypes are often used to legitimise the gender hierarchy (Jost & Kay, 2005; Rudman & Glick, 2008), and therefore it is likely that feminist identifiers find gender stereotypes more problematic than low feminist identifiers do. At the same time, gender stereotypes provide information about which behaviours are considered typical and appropriate for the group (Prentice & Carranza, 2002), and provide a basis for differentiation from out-groups (Spears et al., 1997), in this case, men. Therefore it is likely that high women's identifiers find gender stereotypes *less* problematic than low women's identifiers do. Thus, in line with the results of Study 2.2, we may expect additive effects of women's and feminist identification on perceptions of gender stereotypes.

However, we may also expect women's and feminist identification to interact. For instance, dual identifiers' attachment to femininity and tendency to self-stereotype may weaken the effect of feminist identification on their disapproval of stereotypes. Amongst distinctive feminists, on the other hand, the low attachment to femininity and reduced tendencies to self-stereotype associated with low identification with women, may strengthen the effect of feminist identification on their disapproval of stereotypes.

In sum, distinctive feminists are expected to object to stereotypes more than other groups of women do, either as a result of additive or interactive effects.

Method

Participants. A community sample of 197 female participants was recruited through ProlificAcademic. Of these, 59% were from the United Kingdom, 36% were from the United States, and 5% had other nationalities. Age ranged from 16 years old to 68 years old, with a mean age of 30.6 (SD=10.758 years). Eight participants were excluded because their completion times exceeded the mean completion time by more than 3 SD, indicating that they had not completed the study in one sitting. Three participants were excluded because they failed the attention check. Two further participants indicated that they had trouble understanding the questions, and were also excluded. The final sample included 184 participants.

The stopping rule used during data collection was a practical one: the number of participants that could be recruited within a 3-week period, or until the sample was large enough to detect effects of small size. With this sample we are able to detect small effect sizes (d≈0.1) at a power of 1-β=0.85 (Faul, Erdfelder, Lang, & Buchner, 2007).

Independent variables. Independent variables in this study were women's identification, feminist identification, and a within-participants manipulation designed to assess attitudes towards gender stereotypes.

Women's and feminist identification. Women's and feminist identification were measured in the same way as the previous studies (α=0.88 and α=0.97, respectively).

Manipulation. We created a within-participants manipulation to examine women's views on gender stereotyping. Participants were presented with a conversation between two women about gender issues. Views on gender stereotyping are examined through agreement with and liking of two speakers who either criticize or endorse stereotypes. Each speaker made 2 arguments. The anti-stereotype speaker argues that stereotypes are problematic because they legitimise and exacerbate disadvantage faced by women. The pro-stereotype speaker argues that it is women's disadvantage that is problematic, but that stereotypes in themselves are not always negative. Thus, we created a within-participants manipulation with 2 levels (anti-stereotype vs pro-stereotype).

Dependent variables. The central dependent variables were two measures reflecting attitudes towards gender stereotypes.

Ratings of speakers and their arguments. After reading the manipulation, participants rated the speakers on how much they agreed with

them, how considerate, friendly and intelligent they found them, and how much they liked them. Participants also rated each of the arguments made by the speakers on agreement, eloquence, and persuasiveness. Ratings of how considerate and friendly the speakers were, were highly correlated (r=0.805) and taken together to create a measure of perceived warmth. As the anti-stereotype speaker was more critical of stereotypes than the pro-stereotype speaker, we expected that 1) higher feminist identification would lead to higher ratings for the anti-stereotype speaker than the pro-stereotype speaker, whereas 2) high women's identification would lead to *lower* ratings for the anti-stereotype speaker than the pro-stereotype speaker.

Perceptions of stereotypes. As a second measure of perceptions of stereotypes, participants saw a list of statements reflecting stereotypes of women, including positive and negative, prescriptive and descriptive stereotypes (Eagly & Karau, 2002; Rudman, 1998). Examples included "women have better social skills than men" (positive descriptive), and "women should not be as ambitious as men" (negative prescriptive). For each of these items, participants rated how problematic they found the statement. We expected that distinctive feminists find stereotypes more problematic than other groups of women do.

Finally, we also included measures to replicate findings of Study 2.1. These were perceived femininity of the self (α=0.87), perceived disadvantage for women (α=0.93), Modern Sexism (α=0.78), hostile sexism (α=0.94) and benevolent sexism (α=0.92). These measures were identical to the ones used in Study 2.1.

Procedure. Data was collected through Qualtrics. Participants accessed the study through the ProlificAcademic website. At the start of the study, participants provided informed consent, completed demographic information (including gender), as well as the measures of feminist identification and women's identification, and the replication measures. They then read the manipulation text and rated the speakers and arguments, followed by the measures of attitudes towards stereotypes and attitude strength. At the end of the study, participants read a debriefing and were thanked for their participation.

Analysis. Predictors in the analyses presented below were women's identification, feminist identification, and their interaction. Thus, the results described below control for the influence of the other identity and the interaction.

Results

Identification with women and feminists. Women's identification was above the mid-point of the scale (*M*=4.90, *SD*=0.97; 7-point scale), while identification with feminists was below the mid-point of the scale[1] (*M*=3.41, *SD*=1.54; 7-point scale). The correlation between women's identification and feminist identification was somewhat higher than in previous studies, *r*=0.25, and this correlation was significant (*p*=0.001).

Attitudes predicted by women's identification. As in Study 2.1, higher women's identifiers saw themselves as more feminine than low women's identifiers, β=0.52, *F*(1,185)=63.56, *p*<0.001.

Attitudes predicted by feminist identification. As in Study 2.1, high feminist identifiers perceived more sexism in society (β=0.68, *F*(1, 185)=135.99, *p*<0.001), perceived more disadvantage for women, β=0.41, *F*(1, 192)=37.31, *p*<0.001, and endorsed less hostile sexism, β=-0.53, *F*(1,184)=62.05, *p*<0.001.

Interactions and additive effects.

Benevolent sexism. Benevolent sexism was predicted by additive effects of women's identification and feminist identification. Higher feminist identifiers endorsed less benevolent sexism, β=-0.16, *F*(1,185)=11.06, *p*=0.001, while higher women's identifiers endorsed more benevolent sexism (β=0.49, *F*(1,185)=34.82, *p*<0.001).

Perceptions of stereotypes. Participants indicated how problematic they found positive and negative, prescriptive and descriptive stereotypes of women. Results are depicted in Figure 2a. For prescriptive stereotypes, negative items were perceived as more problematic by higher feminist identifiers, β=0.21, *F*(1, 184)=9.89, *p*<0.002, η^2_p = 0.05. Higher women's identifiers saw these stereotypes as less problematic, but this effect did not reach significance (β=-0.17, *F*(1, 184)=2.21, *p*=0.14). For positive items there were additive effects of feminist and women's identification: higher feminist identifiers rated positive prescriptive stereotypes as more problematic (β=0.34, *F*(1, 184)=21.48, *p*<0.001, η^2_p=0.11) , while higher women's identifiers rated them as less problematic (β=-0.39, *F*(1, 184)=10.08, *p*=0.002, η^2_p=0.05). That is, (positive) prescriptive stereotypes are perceived as more problematic as feminist

[1] As the mean score on gender identification in this sample was somewhat lower than in previous studies, when examining simple effects, we use the means based on previous studies. This is done to ensure that the same groups are compared in all studies. If not, two participants with the same scores may fall into different subgroups due to the difference in means of the sample they are part of.

identification goes up and women's identification goes down.

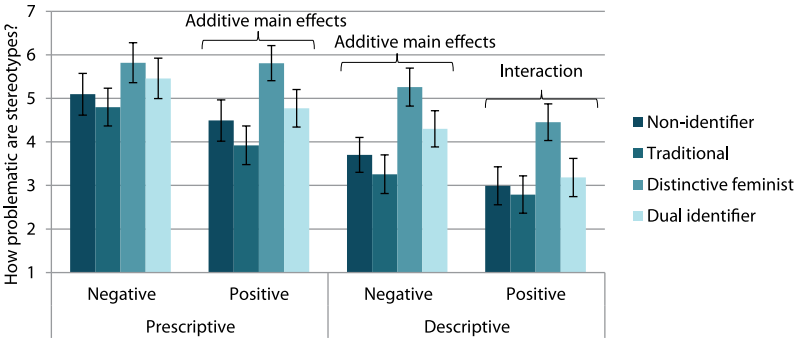
For descriptive stereotypes, negative items were affected by additive main effects of identification: higher women's identification rated these stereotypes as less problematic (β=-0.33, F(1, 184)=7.72, p=0.006, η^2_p=0.04), while higher feminist identifiers rated them as more problematic (β=0.41, F(1, 184)=32.49, p<0.001, η^2_p=0.15). Importantly, for positive descriptive stereotypes feminist identification and women's identification interacted, F(1,184)=6.16, p=0.014. Decomposition of the interaction showed that distinctive feminists find positive descriptive stereotypes significantly more problematic than dual identifiers, β=-0.57, F(1,184)=13.92, p<0.001, η^2_p= 0.07, and non-identifiers, β=0.46, F(1, 184)=19.88, p<0.001, η^2_p = 0.1.

These findings support the hypothesis that distinctive feminists find stereotypes more problematic than other groups of women; this pattern was particularly pronounced for positive descriptive stereotypes.

Effects of the manipulation. The manipulation exposed participants to two speakers who each put forward two anti- or pro-stereotype arguments. In general the pro-stereotype speaker was given more positive ratings than the anti-stereotype speaker (F(1, 182)=55.90, p<0.001, η^2_p= 0.24). An interaction between the speaker and the dimension on which they were rated (F(1,182)= 41.12, p<0.001) showed that this was particularly true for ratings of agreement: participants agreed more with the pro-stereotype speaker than the anti-stereotype speaker. Moreover, the preference for the pro-stereotype speaker over the anti-stereotype speaker was marginally stronger amongst high women's identifiers, F(1, 182)=3.41, p=0.067, η^2_p= 0.02.2 Thus, the hypothesis that high women's identifiers would rate the pro-stereotype speaker more positively than the anti-stereotype speaker was supported. However, the hypothesis that high feminist identifiers would rate the anti-stereotype speaker more positively than the pro-stereotype speaker was not supported.

[2] Aside from the differences between the speakers, there were main effects of both identification variables (women's identification F(1,182)=19.826, p<0.001, η^2_p = 0.098; feminist identification, F(1,182)=11.840, p=0.001, η^2_p= 0.061): higher feminist identification and higher women's identification lead to more positive ratings. Finally, there was a marginal interaction between women's identification and feminist identification (F(1, 182)=3.902, p=0.050), such that non-identifiers gave lowest ratings overall.

Figure 2a: Perceptions of stereotypes in Study 2.3.



NB: Error bars represent 1 standard error. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Discussion

Study 2.3 replicated results from Study 2.1 in a community sample. Identification with feminists was related to attitudes regarding the group's position, while identification with women was related to attitudes towards group characteristics. These findings support the multiple identities approach in showing that identification with women and identification with feminists are distinguishable components of gender identity.

Aside from replicating earlier studies, this study also showed some novel findings, namely that both identification with women and identification with feminists affect attitudes towards issues that have a bearing on both group characteristics and the social standing of the group. Specifically, in line with our hypothesis, results showed that women find gender stereotypes more problematic as identification with feminists goes up, and identification with women goes down. This pattern appeared as a result of additive effects for prescriptive stereotypes, and as an interaction for descriptive stereotypes. Moreover, a similar pattern appeared for the endorsement of benevolent sexism.

These findings illustrate that, in line with the multiple identities reasoning, different combinations of the two identities can lead to distinct gender attitudes. Interestingly, several other recent studies have also found evidence for interactive effects of identification with women and feminists on gender

attitudes (e.g. in this issue Leicht, Goclowska, van Breen, de Lemus, & Randsley de Moura, 2017; van Breen, Spears, Kuppens, & de Lemus, 2017). One way of conceptualizing how the two identities may be combined, is by thinking of the different combinations as reflecting theoretical "identity types" or identity profiles. In such a taxonomy, the first group includes women who are not strongly identified with either women or feminists ("non-identifiers"). Secondly, there are those who identify strongly with women but not feminists ("traditional women"; see Condor 1986). In addition, there are two feminist profiles: those who are highly identified with feminists and women (whom we might call "dual identifiers", see in this issue Leicht et al., 2017), and those who identify strongly with feminists, but less strongly with women (whom we refer to here as "distinctive feminists"). These different identification "profiles" are not necessarily fixed or absolute categories, but rather should be seen as a way of conceptualizing different approaches to integrating the identities. We return to this conceptualization in more detail in the General Discussion.

It is worth noting that the fact that some women do not object to (some forms of) stereotypes need not mean that they accept the lower status implications associated with gender stereotypes. They may support the notion of "typically female" activities and interests, but still object to the idea that these imply lower status. For instance, they may argue that typically female traits such as warmth should be valued more.

One limitation of the current study is that the measure of perceptions of stereotypes asked only about how problematic participants found the statements. Participants might find certain statements problematic for different reasons. For instance, they may find stereotypes problematic because they are untrue, but they may also consider stereotypes problematic precisely because they are true. Additionally, it is worth noting that the manipulation of perceptions of stereotypes did not produce the expected effects. Study 2.4 examines these issues in more detail.

Study 2.4

This study aimed, firstly, to replicate the findings of Study 2.3, and to refine the measure of perceptions of stereotypes. While Study 2.3 asked only how problematic participants found the statement presented, the current study also asked how true participants found the statements, and to what extent they thought other people considered the statement to be true. This

last question was designed to assess perceptions of the stereotypical nature of the statement with making explicit reference to stereotypes. In all other respects the design and measures of Study 2.4 were identical to those of Study 2.3. Based on Study 2.3 results, we expect that distinctive feminists will find gender stereotypes more problematic than other groups of women do, as a result of interactive effects of women's and feminist identification in the case of positive descriptive stereotypes, and as a result of additive effects in the case of positive prescriptive and negative descriptive stereotypes.

Method

Participants. Participants were 200 female students at the University of Groningen. Age ranged from 17 years old to 31 years old, with a mean age of 19.7 (SD=2.081). Four participants were excluded because their completion times exceeded the mean completion time by more than 3 SD. Six participants were excluded because they failed the attention checks. Three participants had to be excluded because they completed the study twice. The final sample included 187 participants.

The stopping rule used during data collection was a practical one: the number of participants that could be recruited within a 3-week period, or until the sample was large enough to detect effects of small size. With this sample we are able to detect small effect sizes (d≈0.1) at a power of 1-β=0.85 (Faul, Erdfelder, Lang, & Buchner, 2007).

Independent variables. The independent variables were the same as in Study 2.3: women's identification, feminist identification and the within-participants manipulation.

Dependent variables. The dependent variables in this study were largely the same as in Study 2.3. Only those measures that were added or adapted are described below.

Perceptions of stereotypes. As in Study 2.3, participants indicated how problematic they found statements reflecting stereotypes of women. We also asked participants how true they found these stereotypes.

Gender differentiation. We included 2 items examining women's views on gender differentiation, to examine the idea that support for stereotypes may be driven by a desire for gender differentiation. Items were "the fact that women are different from men should be a point of pride", and "women should try to disprove the idea that women are different from men" (reverse coded) (α=0.53).

Exploratory items. Finally, we included five exploratory items to examine how participants perceive women who behave stereotypically. Examples include "women who use their femininity to get ahead are only putting themselves down in the long run (reverse coded)", and "women who use their femininity to get by are only making the best of difficult circumstances" (α=0.62).

Procedure. Data was collected through Qualtrics®. Participants accessed the study through the University of Groningen website. Participants first provided informed consent and subsequently completed the measures in the same order as in Study 2.3. The new measure of gender differentiation and the exploratory items were completed at the end of the study. After completing all tasks, participants read a debriefing and were thanked.

Analysis. The analysis of the data was identical to the analysis in Study 2.3, except that in the analysis of ratings of the problematic nature of stereotypes, we control for their perceived truth, a measure that was not present in Study 2.3. The correlation table can be found in the supplementary materials.

Results

Identification with women and feminism. On average women identified strongly with their gender in-group (M=5.43, SD=0.99; 7-point scale), while identification with feminism was substantially lower (M=3.32, SD=1.50; 7-point scale). The correlation between identification with women and feminism was similar to that in previous studies at r=0.26 (p<0.001).

Attitudes predicted by women's identification. Ratings of one's own femininity were affected by women's identification, β= 0.64, F(1,185)=64.58, p<0.001, η^2_p=0.28, such that higher women's identification lead to higher perceptions of femininity.

Attitudes predicted by feminist identification. As in previous studies, those who identified with feminism perceived more sexism in society (β=0.27**,** F(1,184)=43.83, p<0.001, η^2_p=0.21), endorsed less hostile sexism, β=-0.29**,** F(1,184)=42.586, p<0.001, η^2_p=0.20, and less benevolent sexism β=-0.21, F(1,184)=17.11, p<0.001, η^2_p=0.09.

Interactions and additive effects.

Perceptions of stereotypes. For prescriptive stereotypes, those who perceived the stereotypes as more true, perceived them as less problematic, both for negative items (β=-0.64, F(1,185)=43.17, p<0.001, η^2_p=0.19) and positive items (β=-0.69, F(1,185)=49.16 p<0.001, η^2_p=0.22). Moreover, there was an effect of feminist identification for negative items (β=0.12, F(1,185)=4.09,

p=0.045, η^2_p=0.02), such that higher feminist identifiers tended to find negative prescriptive stereotypes more problematic than low feminist identifiers.

For descriptive stereotypes, negative items were also rated as more problematic as feminist identification goes up (β=0.18, F(1,185)=7.50, p=0.007, η^2_p=0.04) and women's identification goes down (β=-0.25 , F(1,185)=6.46, p=0.012, η^2_p=0.04), but ratings were not affected by adding perceived truth of the items as a covariate (F<1). For positive items the effect of perceived truth did reach significance, β=-0.48, F(1,185)=41.52, p<0.001, η^2_p=0.19, those who perceived the stereotypes as more true saw them as less problematic. Moreover, as in Study 2.3, positive descriptive stereotypes were affected by an interaction between feminist and women's identification (F(1,185)=5.20, p=0.024): distinctive feminists found positive descriptive stereotypes more problematic than dual identifiers (β=-0.35, F(1,185)=6.57, p=0.011, η^2_p=0.04) and non-identifiers (β=0.21, F(1,185)=4.63, p=0.033, η^2_p=0.03). These results are depicted in Figure 2b.

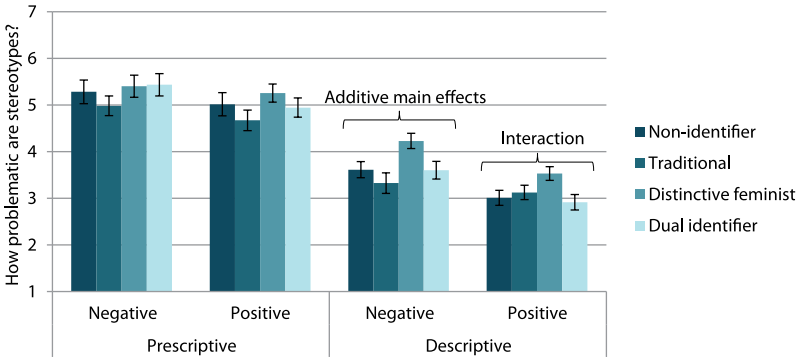
In sum, results confirmed our hypothesis, and replicated results of Study 2.3, showing that distinctive feminists consider (positive) descriptive stereotypes more problematic than dual identifiers do. Importantly, these patterns appear while controlling for the perceived truth of the stereotype. That is, the difference between the distinctive feminists and other groups of women is not due to the fact that they consider stereotypes of women more or less true.

Gender differentiation. Overall, low women's identifiers reported lower endorsement of gender differentiation (β=0.22, F(1,185)=5.87, p=0.016). Moreover, there was a marginal interaction between feminist identification and women's identification (F(1,185)=3.54, p=0.061), showing that support for differentiation was lower amongst distinctive feminists than amongst non-identifiers (β=-0.25, F(1,185)=5.95, p=0.016) and dual identifiers (β=0.42, F(1,185)=9.37, p=0.003).

Effects of the manipulation. As before, the manipulation of a pro-stereotype and anti-stereotype speaker produced no theoretically interesting effects, which confirms findings from Study 2.3. Details of the results of this measure can be found in the supplementary materials.

Additional measures. Results showed no significant effects of women's identification, feminist identification or their interaction on judgments of stereotypical behavior by other women (Fs<1.21, ps>0.27).

***Figure 2b**:* Perceptions of stereotypes in Study 2.4.



NB: Error bars represent 1 standard error. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Discussion

Overall, the results of Study 2.4 correspond largely to those of Studies 2.1-2.3. As in Studies 2.1 and 2.2, identification with feminists reflected attitudes towards group relations, while identification with women reflected attitudes towards group characteristics. Moreover, we replicated the interaction from Study 2.3, which showed that women who are more strongly identified with feminists are more critical of gender stereotypes, and this effect of feminist identification is stronger amongst lower women's identifiers.

Study 2.4 also revealed some novel findings. Firstly, perceptions of the problematic nature of gender stereotypes could not be explained by differences in the perceived truth of gender stereotypes. Moreover, alongside an increased perception that gender stereotypes are problematic, Study 2.4 showed that women who are strongly identified with feminists, but not women, were less likely to support gender differentiation. These findings are in line with other recent work from our lab, which has examined responses to *implicit* gender stereotypes (van Breen et al., 2017). Results in that line of studies show that stronger identification with feminists and *lower* identification with women as a group leads women to *resist* exposure to implicit gender stereotypes, for instance through persistence in counter-stereotypical performance domains.

Although those who are highly identified with feminists, *but not* with women ("distinctive feminists") are most conspicuous in the results, theoretically speaking the dual identifiers (who are strongly identified on both dimensions) are also interesting. Dual identifiers are feminists, but do not object to stereotypes to the same extent that distinctive feminists do. This finding may be due to the fact that stereotypes can provide differentiation from the out-group (i.e. men, see Brewer, 1991; Mlicki & Ellemers, 1996) which may lessen the objections of the dual identifiers, bringing their responses in line with those of low feminist identifiers.

It is worth noting that, as in Study 2.3, the manipulation did not produce the expected effects. Overall, participants agreed more with the arguments of the pro-stereotype speaker than the arguments of the anti-stereotype speaker. It may be the case that the anti-stereotype speaker was perceived as "too radical". The anti-stereotype arguments were phrased quite prohibitively, such as "women should not behave stereotypically, as it reinforces the disadvantage women face." Participants may have disliked this, and therefore favoured the pro-stereotype speaker. An additional limitation of the manipulation was that both speakers expressed disapproval of women's low status position, and as such both speakers could be said to be feminists. Indeed, there is some evidence that lower feminist identification was associated with lower agreement with the speakers overall (see supplementary materials). The disapproval of the low status position of women was kept constant, rather than varied, because the measure was designed to focus on perceptions of *stereotypes* as harmful or not. If we had also varied speakers' views on women's disadvantage, the conversation would have become very complex. Already there was some evidence that participants found it difficult to remember details of the conversation, and as such we considered it undesirable to further complicate the manipulation.

General Discussion

The studies presented here provide insight into how women's and feminist identity predict different attitudes towards gender as a social category. We now review the results of the studies in the light of the multiple identities approach, and evaluate its utility in predicting attitudes towards gender issues.

The multiple identities approach. The multiple identities approach proposes that attitudes towards gender as a social category are determined

by two distinct dimensions of gender identity: women's identity, reflecting attitudes towards the characteristics associated with the group, and feminist identity, reflecting attitudes towards the social position of the group. This **C**entral prediction of the model is confirmed across the four studies reported here, in student samples as well as a community sample. That is, the studies confirm that women's identity and feminist identity represent distinguishable aspects of gender identity, and as such, that gender identity is not unitary (Becker & Wagner, 2009; Condor, 1986; Henderson-King & Stewart, 1994). Moreover, results show that women's identity is related to attitudes towards group characteristics, such as femininity and self-stereotyping. These "group characteristics" need not be thought of as essentialist traits, but rather as part of a culturally shared understanding of women as a social category (Devine, 1989; Rudman & Glick, 2008). Identification with feminists, by contrast, is related to attitudes towards the group's social position, such as support for collective action and perceptions of sexism.

Combining identification with women and feminists. If we consider gender identity in the light of the multiple identities approach, this gives rise to the question of how the dimensions may be combined. The multiple identities approach suggests that, when a certain issue has a bearing on both group characteristics and the group's social position, attitudes towards such an issue will be affected by both identification with women and identification with feminists. Indeed, studies 2-4 showed that issues such as support for radical collective action and perceptions of gender stereotypes are affected by both identification with women *and* identification with feminists, manifested as additive or interactive effects. The finding that particular combinations of identification with women and feminists lead to differences in attitudes towards gender issues is not only in line with the multiple identities approach, but also corresponds to other recent work from our lab (van Breen et al, 2017), as well as the findings of Leicht et al. (2017, this issue).

The combinations of different gender identities can be thought of in terms of different conceptual groups or "prototypical types" of gender identifiers. In fact, several theorists have found it helpful to discuss the possibility of gender identity "subgroups" to address the question how different aspects of gender identity relate to one another (Becker & Wagner, 2009; Condor, 1986; Gurin & Markus, 1989). In our approach, the first possible combination includes those whose identification with both women and feminists is relatively low ("non-identifiers"). Non-identifiers navigate gender group membership by

giving priority to social identities *outside* the gender context, as they dislike being viewed in terms of gender (Barreto, Ellemers, Scholten, & Smith, 2010). Secondly, there are those who identify strongly with women but not feminists ("traditional women"). Traditional women focus on women's identity and value typically female gender roles (Condor, 1986), but they disavow feminist concerns about the social position of women. There are two feminist subgroups: those who are highly identified with feminists *and* women ("dual identifiers"; see Leicht et al., 2017 in this issue), and those who are highly identified with feminism, *but not* women (whom we have called "distinctive feminists"). Dual identifiers can be described as preferring integrative identity management strategies that unite their commitment to women as a group with their commitment to feminism. For instance, they may be willing to take on leadership positions (Leicht et al, 2017; this issue), but prefer more feminine styles when they do so (Olsson & Walker, 2004). Distinctive feminists, on the other hand, navigate gender group membership by giving priority to feminist identity over women's identity. For instance, they may disavow feminine beauty ideals because they perceive them as contributing to women's objectification (Murnen & Smolak, 2009). It is important to note that even though "distinctive feminists" do not identify highly with women, this does not mean that they are "anti-women" (see Becker, Tausch, Spears, & Christ, 2011; Cichocka, De Zavala, Kofta, & Rozum, 2013). Rather, they disavow the (current) *social construction* of the group.

Importantly, this taxonomy does not represent fixed or absolute categories, but rather a way of conceptualizing different approaches to integrating the identities. Indeed, we see gender identity as dynamic and context-dependent. Given that the social construction of identity plays a large part in our approach, arguably the most important contextual factor is the nature of the social construction. Different cultures may construct gender differently, and this may in turn affect attitudes to specific gender issues. Additionally, an individual's commitment to the different identities may develop over time, for instance through personal experience. Likewise, research on social influence has shown that making salient an intergroup context can shift individuals' attitudes towards those of more radical minorities within the in-group (David & Turner, 1999). As we used cross-sectional data we did not examine this dynamic component of multiple identities in the current study, but we believe this is a fruitful area for future research.

In sum, the different combinations of high versus low identification with

women and feminists can be thought of as reflecting different strategies for managing multiple gender identities. Some women prioritize one dimension over the other (traditional women; distinctive feminists) while others seek to integrate them (dual identifiers).

Advantages of the multiple identities approach. The multiple identities approach has several advantages that are worth highlighting. Firstly, the fact that women's identity and feminist identity represent separable components of gender identity allows for different kinds of identity content, which is crucial when attempting to model something as diverse as attitudes towards gender group membership. One consequence of this is that feminist identity and femininity are not mutually exclusive: a woman may embrace both femininity and feminism. As noted above, this issue is also reflected in feminist discourse (Butler, 2002; Gilligan, 1977). A further consequence of the two independent dimensions is that some women are highly identified with women as a group, but do not hold politicized identities. Indeed, our findings on collective action confirm that high identification with women does not automatically increase politicized attitudes (Henderson-King & Stewart, 1994).

As feminist identity can function independently of women's identity, feminist identity can also be part of men's gender identity (e.g. Digby, 2013). Preliminary results of applying the multiple identities approach to men's gender identity[3] show that, as amongst women, men's identification correlates with perceived masculinity and self-stereotyping, while stronger identification with feminists increases perceived prevalence of sexism. However, the relationship between the identities is somewhat different amongst men: for men the factors are negatively correlated; those who identified more strongly with men, and felt more masculine, were less likely to identify with feminism (see also Burn, Aboud, & Moyles, 2000; Lemaster, Strough, Stoiko, & DiDonato, 2015). In sum, the possibility of applying the multiple identities approach to men's gender identity allows us to assess how men's attitudes towards gender group membership differs from women's, as well as where similarities lie. Though further work is needed on this front, we consider this a strength of the model.

The distinction between group characteristics and the group's social position may also play an important role in how people think of identities outside the gender context, such as ethnic group membership. For instance, we can think of the multiculturalist approach to ethnic diversity as appreciating group differences while also addressing political disadvantage (Verkuyten &

[3] Further details of this work can be obtained from the first author.

Brug, 2004), suggesting that, as the multiple identities approach argues, both attitudes to group characteristics and perceptions of the group's social position play a role in how social group membership is constructed.

A further methodological strength of this approach is its concise measure of identification, using eight items in total to measure women's and identification with feminists. The items used to measure both identities were the same, apart from the fact that the word "women" was replaced by "feminists". Thus, the identities are shown to be independent, even when there measures are very similar. Therefore, the lack of correlation between women's and feminist identity is a conservative test of the independence of the identities.

A limitation of the current study is its correlational nature, preventing inferences about causal direction. For instance, the relationship between identification with feminists and perceived sexism might arise because identification with feminists leads to increased sensitivity to sexism (Major, Quinton, & Schmader, 2003) or, conversely, increased exposure to sexism might lead to increased identification with feminism (Henderson-King & Stewart, 1994). In fact, it is likely that both these processes play a part in identity development.

Conclusions. This study develops the multiple identities approach to gender identity, in which women's identity and feminist identity are orthogonal components of gender identity, which together predict attitudes towards gender group membership. Women's identity predicts attitudes towards group characteristics, such as perceived femininity and self-stereotyping, while feminist identity predicts attitudes towards the group's social position, such as sexism and disadvantage for women. Different combinations of identification with women and feminists give rise to four conceptual identity profiles: non-identifiers, traditional women, distinctive feminists, and dual identifiers. Importantly, the multiple identity approach helps to explain differences in gender attitudes, notably that: 1) Strong identification with feminists does not preclude a sense of being feminine; 2) Strong identification with women as a group does not automatically increase politicized attitudes; and 3) Critical attitudes towards gender stereotypes are most pronounced amongst feminists who are less strongly identified with women. Taken together, findings from these studies suggest that considering women's identity and feminist identity as multiple identities can provide valuable new insights into attitudes towards gender group membership.

3

Implicit resistance to implicit gender identity threat: Who, why, how?

Note: This chapter is based on van Breen, J.A., Spears, R., Kuppens, T., & de Lemus, S. (2017). Implicit resistance to implicit gender identity threat: Who, why, how?

Abstract

In this chapter, we examine whether women can resist implicit threat to social identity. Implicit identity threat was manipulated by exposing women to implicit gender stereotypes. Results from three studies showed that exposure to implicit stereotypes lead non-feminist identifiers to implicitly associate their in-group with more stereotypical attributes. In contrast, high feminist identifiers experience threat following exposure to implicit stereotypes. A subgroup of these feminist identifiers - those who identified with feminists but not with women ("distinctive feminists") - was able to resist implicit stereotype exposure through implicit in-group bias. More specifically, after exposure to implicit stereotypes, they were faster to implicitly associate their in-group with positive words. Moreover, distinctive feminists resisted implicit gender identity threat through persistence in a stereotypically male performance domain. In sum, our findings amongst distinctive feminists suggest that implicit identity threat can be resisted, and that when it comes to protecting a valued social identity, people are more resilient than previously thought.

Social and political movements campaigning for the emancipation of women and civil rights have reduced the social acceptability of prejudice and discrimination in Western society since the beginning of the 20th Century. Although explicit stereotypes and prejudice are increasingly rejected, at a more subtle level they continue to exist, and shape social interactions (Barreto et al., 2009; Pearson et al., 2009; Swim et al., 1995). Importantly, research has shown that such subtle stereotypes are more difficult to recognize and their effects are harder to combat than those of explicit stereotypes (e.g. Major et al., 2003). The current studies examine whether victims might nevertheless be able to *resist* stereotypes that are present outside of conscious awareness.

A considerable literature has investigated how people deal with stereotypes from the perspective of the *perpetrator*. For instance, perspective taking can decrease stereotypic biases (Galinsky & Moskowitz, 2000). Additionally, the activation of stereotypes can be prevented by automatic negation of stereotypes through directed retraining (Kawakami et al., 2000). Likewise, those who are chronic egalitarians can avoid automatic prejudice and stereotypes (Moskowitz et al., 2000), even when explicit compensation is not possible (Moss-Racusin et al., 2010). Thus, *perpetrators* of stereotypes are able to use explicit and implicit strategies to avoid stereotyping. For *victims*, exposure to stereotypes can create social identity threat, that is, the realization that a social group to which one belongs is devalued (Steele et al., 2002; Tajfel & Turner, 1979). People are motivated to defend themselves against such threats (Barreto et al., 2010; Steele et al., 2002), and here we examine the possibility of resistance against identity threat that occurs at the implicit level.

Resistance to identity threat. In this chapter we define "resistance" as a motivational process that leads to responses that *counteract* social identity threat. This definition is in line with the common definition of resistance as "the struggle against" or "refusal to comply with" a certain notion. Though such a definition may have connotations of political struggle and activism (e.g. Simon & Klandermans, 2001), we believe that more subtle strategies can also fit this description. For instance, threat to in-group identity may be resisted through responses that reaffirm group worth, such as in-group bias (Voci, 2006), or by emphasizing counter-stereotypical competences (de Lemus et al., 2013). That is, we conceive of resistance as responses aimed at disproving or counteracting identity threat.

In the current studies, we examine resistance to identity threat arising from exposure to stereotypes. Research has identified several processes that

might be deployed to challenge stereotypes, but not all of these fit the definition of resistance described above. It may be useful to contrast some influential examples of such processes with the concept of resistance. In the Just-Say-No paradigm, Kawakami et al. (2000) showed that repeated negation of stereotypes reduced their subsequent automatic activation. This mechanism of activating and deactivating associative links is cognitive, and imposed by the experimenter, rather than being internally motivated. A key difference, therefore, is that in the Just-Say-No paradigm participants are required to *go along* with instructions to reject stereotypes, whereas in the case of resistance victims spontaneously *react against* stereotypes. This motivational basis also distinguishes the effects of resistance from contrast effects, which may be produced by exclusively cognitive or perceptual processes such as anchoring (Bless & Schwarz, 2010) or comparison (e.g. Mussweiler, 2003). Resistance does not imply automatic contrast to just any stimulus, but targeted contrast to those stimuli that are threatening to social identity. Similarly, resistance differs from compensation-related processes (Glaser & Kihlstrom, 2005; Moss-Racusin et al., 2010), in that it occurs in response to self-relevant social threat, while compensation may occur following any negative event. The concept of resistance can also be distinguished from related concepts like reactance (Brehm & Brehm, 1981) because it can be elicited by threats in domains other than individual freedom, and can involve group-level concerns, as is the case in the work presented here.

However, research has also uncovered a number of strategies that *do* fit the bill of resistance, ranging from very direct to very subtle. For instance, the experience of being stereotyped has been shown to lead to feelings of anger and willingness to protest (Barreto et al., 2010). Moreover, exposure to stereotypes leads to in-group bias (Mullen, Brown, & Smith, 1992), which serves to re-establish group worth (Spears et al., 2001). In terms of behavior, exposure to gender stereotypes leads to behavioural reactance (Kray et al., 2001), whereby women perform better in counter-stereotypical domains after they have been stereotyped. Bry, Follenfant and Meyer (2008), for instance, showed that stereotype exposure improved performance amongst those who perceived incongruence between themselves and the stereotype. Similarly, exposure to stereotypes can elicit task *persistence.* Nussbaum and Steele (2007) show that African American students showed increased persistence when they were told that a certain task was diagnostic of academic ability (a domain where African American students are stereotyped). Likewise, de

Lemus et al. (2017) found that to stereotypical gender roles lead women to persist in a counter-stereotypical domain (a spatial reasoning task).

As has been shown to occur for other motivational processes such as goal activation (Bargh et al., 2001; Glaser & Kihlstrom, 2005), we argue that resistance can also occur through implicit strategies. Implicit resistance to stereotypes might be conceived of as functioning like resistance in the physical immune system (vanDellen et al., 2011), fighting disease without the individual's awareness or control. Several recent studies have documented implicit resistance effects. For instance, women who are exposed to stereotypical gender roles (e.g., women in the kitchen, men in the office) implicitly associate their in-group with counter-stereotypical attributes (de Lemus et al., 2013). Likewise, women who observed sexist interactions between men and women showed activation of counter-stereotypical in an implicit association test (IAT, Ramos et al., 2015). Note that these associations are the outcome of a motivated process, rather than a mechanism whereby stereotypes are unlearnt (cf. Kawakami et al., 2000). Additionally, there is evidence for implicit evaluative in-group bias following exposure to implicit stereotypes, whereby participants associate their own in-group more readily with positive attributes after exposure to stereotypical role divisions (de Lemus et al., 2017). Thus, implicit resistance responses can be evident from responses such as implicit in-group bias, or the activation of counter-stereotypical traits.

In sum, stereotype exposure may be resisted through both implicit and explicit strategies. However, it is unclear whether resistance is also possible when the threat *itself* is implicit, that is, when the threat is not consciously perceived. This question is the focus of the present research.

Implicit identity threat. Implicit identity threat is a form of threat of which the victim is not consciously aware. For instance, when a woman is told by her superiors at work that she has failed to secure a promotion, and praised by a neighbour for her efforts in the home, neither one of these instances are explicitly sexist. However, when such experiences build up over time, on an implicit level, they may convey cues about gender roles. That is, though an individual may not be consciously aware of the link between their group membership and their experiences, they may implicitly learn the association. Although some individuals may not be responsive to these experiences, others (such as, in the context of gender, feminist identifiers) may experience social identity threat, and build up vigilance and resilience towards such threats, even if they occur at an implicit level. In this chapter we investigate

whether women can resist implicit identity threat resulting from exposure to implicit gender stereotypes.

Research suggests that implicit stereotypes may be more difficult to resist than explicit stereotypes. Compared to explicit stereotyping, subtle stereotypes lead to more stereotypical self-descriptions and self-handicapping (Barreto et al., 2009), as well as lower self-esteem. Similarly, while explicit stereotyping leads to anger and willingness to protest, implicit stereotyping leads people to experience anxiety (Barreto et al., 2010). Major, Quinton and Schmader (2003) found that women had lower self-esteem after exposure to subtle stereotypes, due to the fact that, compared to overt stereotyping, subtle stereotypes were less easily recognized as such and created "attributional ambiguity" about the reason for the negative outcomes. In terms of behavior, when stereotypes are implicit women are more likely to behave in line with the stereotypes (Kray et al., 2001) and show poorer performance (Barreto et al., 2009) than when stereotypes are explicit. When discrimination is subtle rather than overt, women also adopt more submissive body postures (de Lemus et al., 2012), and are more likely to request dependency-oriented help (Shnabel et al., 2015).

Such findings suggest that implicit stereotypes cannot be resisted, and are more harmful than explicit stereotypes (Barreto et al., 2010; Kray et al., 2001). However, studies of implicit stereotyping have typically used explicit outcome measures (Barreto et al., 2010; Kray et al., 2001; Major et al., 2003) so this conclusion may be premature. The current research therefore examines whether people can resist *implicit* stereotypes through *implicit* strategies. If implicit resistance to implicit stereotypes is possible, this would suggest that people are more resilient in protecting valued social identities than previously thought.

Who resists implicit stereotypes? In the case of women, it is likely that the interpretation of gender stereotypes will vary between individuals. For instance, those who identify with feminism may be more likely to experience stereotypes as threatening to their social identity, as feminist identification is known to be related to perceptions of gender inequality, sexism and disadvantage for women (Brown & Pinel, 2003; Henderson-King & Stewart, 1994). In fact, it is likely that the relationship between experiences of identity threat and feminist identification is bidirectional, such that experiences of gender identity threat increase feminist identification (Moradi & Subich, 2002), and feminist identification in turn makes the individual more sensitive to gender

identity threat (Henderson-King & Stewart, 1994). In such a circumstance of repeated confrontation with gender identity threat, resistance can function as a strategy to cope with these experiences. That is, aside from the fact that identification with feminists may lead women to experience identity threat following exposure to stereotypes, feminist identification may also foster *resistance* to gender identity threat. Indeed, feminist identification is a politicized identity, and predicts willingness to engage in collective action on behalf of women (Simon & Klandermans, 2001, see also Chapter 2). That is, those who identify strongly with feminism can be expected to have the goal of confronting stereotypes of women. Importantly for the current study, frequent goal pursuit can make a goal chronically accessible (e.g. Bargh et al., 2001), which increases sensitivity to implicit cues that threaten this goal (Kaiser et al., 2006). As such, we argue that feminist identification should predict both threat experience following exposure to implicit stereotypes, and motivate resistance against this threat.

However, there is evidence that not all feminist identifiers may object equally strongly to stereotypes. Previous work has shown that there is a second identification dimension that affects attitudes to gender stereotypes: identification with women as a broader social group (Henderson-King & Stewart, 1994). In Chapter 2, we found that women's identification interacts with feminist identification, such that the effect of feminist identification on attitudes towards stereotypes is stronger amongst those who score *low* on women's identification. More specifically, those who identify strongly with feminists, but *not* the broader group of women, are more likely to object to gender stereotypes than other groups of women. One reason for this may be that women's identification is related to satisfaction with being a woman, perceived femininity of the self, and importantly, *self-stereotyping* (Haslam, Oakes, Reynolds, & Turner, 1999; Leach et al., 2008). In the context of the current study, then, it stands to reason that resistance to stereotypes is likely to be stronger amongst those for whom self-stereotyping is less important (or even aversive) to their self-concept. These considerations, based on Chapter 2, led us to refine our predictions, and expect that those who are highly identified with feminists, *but not women*, will be particularly likely to show resistance to implicit identity threat that is based on gender stereotypes.

Given that research has further shown that identification with women and feminists are only weakly correlated (Roy et al., 2007, see also Chapter 2), we treat them as separate dimensions of gender identity, and thus identify

four theoretical "types" of gender identifiers that are characterized by different combinations of women's and feminist identification (see also Becker & Wagner, 2009; Condor, 1986). The first group score low on women's and feminist identification, a group we call "non-identifiers". At the opposite end of the spectrum, there are those who identify highly with women, but are also strong feminist identifiers: the "dual identifiers" (see Leicht et al., 2017). The group who identify strongly with women, but not feminists are referred to as "traditional identifiers" (cf. Condor, 1986), and finally the group who score low on women's identification, but highly on feminist identification we refer to as distinctive feminist identifiers or "distinctive feminists" for short. Note that, even though this last group do not identify highly with women, this does not mean that they are "anti-women". Radical members of social groups may come to experience a degree of dis-identification with their wider group, realizing that their attitudes are not supported by other in-group members. Therefore, such groups may experience lower levels of group identification, while at the same time being strongly committed to the group's interests (see Becker et al., 2011). Moreover, it is this group, who are highly identified with feminists but not women, who are most likely to object to gender stereotypes (see Chapter 2)

Hypotheses. We expect that amongst distinctive feminists, exposure to implicit stereotypes will lead to (1) increased experiences of social identity threat, and (2) resistance, in the form of (2a) implicit in-group bias and (2b) counter-stereotypical associations, as well as (2c) increased performance and persistence in threatened domains (see Sommer and Baumeister, 2002, for evidence that implicit manipulations can elicit such effects). However, we expect that (3) implicit stereotypes will not lead to *explicit* resistance (such as anger or explicit in-group bias), because the implicit threat is likely too subtle to be consciously perceived and attributed to a certain cause (Major et al., 2003). Accordingly, previous studies did not find evidence for explicit resistance in response to implicit stereotyping (Barreto et al., 2010; Rudman, Dohn, & Fairchild, 2007). Therefore, we measure explicit in-group bias and anger as explicit resistance responses. We also measure explicit self-esteem, threat experiences, and general mood as indicators of possible harmful effects of implicit stereotypes (Barreto et al., 2010; de Lemus et al., 2017; Rudman et al., 2007).

Overview of the studies. The data presented here was collected in 3 studies that had similar designs, allowing us to analyse part of the data in a pooled analysis. In this type of analysis, data from the same measure is

pooled across studies. This has a number of advantages, including increased statistical power, and reductions in vulnerability to methodological and statistical artefacts (Curran & Hussong, 2009). For measures that were unique to one particular study or different between studies, results are based on data from those studies.

Study 3.1. In Study 3.1 we aim to examine if, and how, implicit social identity threat can be resisted. In Study 3.1 we distinguished between evaluative and stereotypical dimensions of social identity threat in the manipulation as well as in the outcome measures, as social identity threat based on stereotypical associations or (negative) evaluative associations has been shown to lead to different outcomes (Amodio & Devine, 2006). In terms of the outcome measures, this meant that implicit associations were assessed with two tasks: one examining evaluative gender associations, and the other examining stereotypical gender associations.

Study 3.2. Study 3.2 simplified the design of Study 3.1, and examined whether those who resist also report being more threatened by the manipulation. We use an approach-avoidance task to measure implicit threat experience.

Study 3.3. In Study 3.3, alongside our implicit measures, we examine whether implicit stereotypes affect behavior, and distinguish between performance and persistence. As described above, previous studies have found that exposure to stereotypes may lead to improved performance and increased persistence. We predict increased performance and persistence in response to an implicit manipulation. That is, we examine whether implicit stereotype exposure can lead to improved performance and persistence, as indicators of behavioural resistance.

Method

Participants. Exclusion criteria were 1) awareness of the prime, 2) failure to comply with instructions, and 3) lack of proficiency in Dutch.

Pooled analysis. All participants in these studies were women, recruited from the University of Groningen. For the implicit measures, which are analysed in a multilevel design, we used the method suggested by Westfall, Kenny and Judd (2014) to calculate power.

For measures present in Studies 1 and 2, the final sample included 147 participants. For the measures analysed with ANCOVA, this sample can detect medium effect sizes ($d \approx 0.25$) at a power of $1-\beta=0.80$. For the implicit mea-

sures, this sample can detect small effect sizes[1] (d≈0.1) at a power of 1-β=0.85 (Faul, Erdfelder, Lang, & Buchner, 2007).

Pooling data from Studies 2 and 3 resulted in a sample including 336 participants. For the measures analysed with ANCOVA, this sample can detect small-to-medium effect sizes (d≈0.15) at a power of 1-β=0.80. For the implicit measures, this sample can detect small effect sizes (d≈0.1) at a power of 1-β=0.90 (Faul, Erdfelder, Lang, & Buchner, 2007). .

For measures that were included in all three studies, the pooled dataset included 387 participants. For the measures analysed with ANCOVA, this sample can detect small-to-medium effect sizes (d≈0.15) at a power of 1-β=0.80. For the implicit measures, this sample can detect small effect sizes (d≈0.1) at a power of 1-β=0.95 (Faul, Erdfelder, Lang, & Buchner, 2007).

The sample information per study can be found in Table 3a.

Between-subjects predictors.

Implicit stereotypes. Implicit stereotype exposure was manipulated in 120 trials. Each trial included a picture, preceded by the prime "Woman" or "Man". The prime was presented for 42 ms, with forward and backward masks (random letter strings) presented for 100 ms. Picture stimuli represented stereotypically male and female activities, such as shopping, watching sports, and fishing. These were piloted and 20 activities (5 female-typical leisure activities; 5 female-typical chores; 5 male-typical leisure activities; 5 male-typical chores) were chosen for being rated as stereotypically male or female, but similar in valence. Where people appeared in the pictures, their gender was not visible (e.g. seen from a great distance). In the stereotypical condition female primes were paired with female stereotypical activities, and male primes with male stereotypical activities in 95% of trials. In the counter-stereotype condition, female primes were associated with male-typical activities and male primes associated with female-typical activities[2]. Participants' task was to answer a question unrelated to the stereotype that was primed (i.e., "Does this pictures show a leisure activity or a chore?"). The picture remained on the screen until a response was given. In this manipulation

[1] As there is currently no established method for the calculation of effect sizes for simple effects in multilevel models, several different procedures were considered. We considered it most important to provide an effect size that can be compared to those of measures that do not have a multilevel structure. Therefore, we report Cohen's d, but for effects derived from multilevel models this does not take into account within-subject residual variance in the calculation of the error estimates (see Dunlap et al., 1996).

[2] In Study 3.1, there were 2 additional conditions that were not present in the other studies; these conditions are described in the supplementary materials.

the repeated combination of certain primes with certain target words created stereotypical associations that were expected to create social identity threat amongst distinctive feminists. This paradigm is an adaptation of the one developed by de Lemus et al. (2017) in which stereotypical (vs. counter-stereotypical) social roles were presented as a form of indirect identity threat.

Women's and feminist identification. The threat manipulation was based on exposure to (counter)stereotypical associations, but because these may not be threatening to every participant, we included measures of identification with feminists and women. Participants reported their identification with women on four items (α=0.85), adapted from Doosje, Ellemers, and Spears (1995). These four items were "I identify with women", "In general, being a woman is an important part of my identity", "I feel a strong connection with (other) women", and "Being a woman is an important part of how I see myself". Participants rated their agreement with each item using a 7-point Likert scale; scores on the four items were averaged. Identification with feminists was measured with in the same way as women's identification, except that the word "women" was replaced by "feminists".

The identification variables are continuous variables, and are used as such in all analyses. When the identification variables interact, simple effects are examined at 1 standard deviation above and below the mean. The terminology from the gender taxonomy (non-identifiers; traditional women; distinctive feminists; dual identifiers) is used when describing the interaction between feminist identification and women's identification, as well as in graphs and tables for ease of presentation.

Outcome measures. In this study we include implicit, indirect, and explicit outcome measures. By explicit measures, we mean measures that assess responses that are conscious and considered, the most straightforward example being self-report measures. In contrast, indirect measures are those that assess conscious responses, in which the participant is *not* aware of which element of the response is of interest to the study. As such deliberative processes are unlikely to affect the outcomes of these measures. Finally, implicit measures are those that assess an automatic response that is not under conscious control. Another way of illustrating the difference between these types of outcome measures is through the insight participants have in their own responses. In the case of explicit measures, participants are aware of their score on the construct of interest. In the case of indirect measures, participants do not know what construct is being measured, but if the exper-

imenter were to tell them (e.g. after completing the experiment), they might be able to estimate their response. In the case of implicit measures, even if participants were informed of the construct of interest after completing the study, they could *not* estimate their performance, because they were not consciously aware of it at the time.

Threat experience task. Implicit threat experience was assessed using an approach-avoidance task (De Houwer, Crombez, Baeyens, & Hermans, 2001). Participants direct a little stick-person to approach or avoid neutral (e.g. pocket, candle) and threatening word stimuli (e.g. problem, conflict), and analyses focused on the speed with which this was done. The task consisted of 120 trials: 30 threat-approach trials, 30 threat-avoidance trials, 30 neutral-approach trials and 30 neutral-avoidance trials. The target words were selected to be unrelated to stereotypes. If avoidance of threatening stimuli is facilitated compared to approach of threatening stimuli, this indicates an implicit threat experience. This measure was present in Studies 2 and 3, and analysed with a pooled analysis.

Implicit stereotypes. We assessed *stereotypical* gender associations through a lexical decision task. The task consisted of 240 trials, asking participants to classify a target as a word (N=120) or non-word (N=120). Analyses focused on the speed with which this decision was made. The targets were words representing warmth (N=20) and competence (N=20) (Fiske, Cuddy, & Glick, 2007), and an equal number of non-words. To ensure that all words were similar in valence, only positive words were selected. Non-word targets were letter strings of comparable length and vowel/consonant ratios. The target words were preceded by a forward and backward masked prime (42 ms), which was either a female name or a male name (e.g., "Mary" vs. "John"). As women are stereotypically associated with warmth and men with competence, the classification of warmth traits may be facilitated following a female prime, compared to a male prime. Resistance may manifest itself through a reversal of this pattern (de Lemus et al., 2013). This measure was present in Studies 3.1 and 3.2 and was analysed with a pooled analysis.

Implicit in-group bias. All three studies included an evaluative decision task (Fazio, Jackson, Dunton, & Williams, 1995), which examined responses to positive and negative targets associated with the genders. The task consisted of 120 trials. Each trial presented a subliminal gender prime (a male or female name presented for 42 ms) with forward and backward masks (100 ms), followed by a supraliminal target. Targets were positive (N=20) or nega-

tive (N=20) words without stereotypical connotations, such as 'corpse' or 'vacation' (adapted from Roefs et al., 2005). Participants were asked to classify targets as positive or negative, and analyses focused on the speed with which this decision was made. In this task, the facilitation of female-positive pairs, relative to male-positive pairs (in-group bias), following implicit stereotype exposure (de Lemus et al., 2017) would be indicative of resistance, as it reaffirms group value in the face of implicit stereotypes. This measure was analysed with a pooled analysis.

Behavioural resistance: Math and Anagram tasks. Study 3.3 included two measures of behavioural resistance tendencies. We distinguish competencies that are considered stereotypically feminine, such as language skills, and those that are stereotypically masculine, such as mathematics and spatial abilities (Brandell & Staberg, 2008; Deaux, 1985). Thus, a math task was used to reflect performance and persistence in a male-typical domain, while an anagram task taps a more stereotypical performance domain for women. The two tasks consisted of 10 questions each. If the participant did not know the answer to the question, they could skip the item. The difficulty of the items increased throughout the task, and the final item (unbeknownst to participants) was unsolvable. These measures yielded 1) a performance measure: number of items answered correctly, and 2) a persistence measure: time spent on the unsolvable item. Increased performance and/or persistence in the masculine task after exposure to implicit stereotypes are considered indicative of resistance, as they establish counter-stereotypical ability in the face of stereotypes, thereby disproving these stereotypes. The order of presentation of the math and the anagram tasks was counter-balanced.

Explicit in-group bias. In Study 3.1, participants completed a Decomposed Games measure consisting of 6 items (Bornstein et al., 1983), in which they were given various options for the distribution of hypothetical money between an unknown man and woman. A tendency to allocate more money to women represents in-group bias. Study 3.2 examined explicit in-group bias through a hiring paradigm. In the hiring paradigm participants were asked to evaluate a male and a female job candidate with equivalent CVs on their characteristics and suitability for the job offered (on a 7-point Likert scale). Additionally, participants evaluated the job candidates in terms of general valence: "How positively or negatively do you feel about [Female candidate/ Male candidate]". After the hiring decision, participants rated "men/women in general" on the same items. More positive ratings of the female candidate

and/or women in general indicate in-group bias. The CVs used in the task were pilot-tested to establish that they were perceived as equivalent in terms of competence and warmth. Additionally, the CVs were counterbalanced across target gender, so that half of the participants saw the female candidate paired with the first CV and the male candidate paired with the second CV, and the other half saw the female candidate paired with the second CV and the male candidate paired with the first. This task was considered to provide better structural fit with the implicit measure than the Decomposed Games measure used in Study 3.1, as the bias component in this task is less blatant than in the Decomposed Games measure. In this way, we attempted to rule out the possibility that differences between implicit and explicit outcome measures are due to lack of structural fit (Payne, Burkley, & Stokes, 2008).

Mood. All three studies included a mood scale, which was created from a combination of the dejection/agitation scale (Higgins, 2001), and the PANAS (Watson, Clark, & Tellegen, 1988), resulting in a 28-item scale asking about mood (α=0.84). Participants indicated their response on 7-point Likert scale. This measure was present in all three studies and was analysed with a pooled analysis. Anger will be evaluated separately, as it has been identified as an indicator of resistance (Barreto et al., 2010).

Self-esteem. All three studies included the Rosenberg measure of self-esteem (α=0.786, Heatherton & Polivy, 1991). Participants indicated their responses using a 7-point Likert scale. This measure was analysed with a pooled analysis. Studies 3.2 and 3.3 included the Rosenberg questionnaire as a pre-measure of self-esteem (Rosenberg, 1965), but since Study 3.1 did not include this it is not part of the pooled analysis.

Sexism. At the end of Study 3.2, participants completed the Modern Sexism scale (α=0.795, Swim et al., 1995) and the Ambivalent Sexism scale (α=0.846, Glick & Fiske, 1996) using 7-point Likert scales, to assess perceptions of sexism in society, and endorsement of sexism.

There were some additional outcome measures in individual studies that are described in the supplementary materials, for instance because of methodological problems.

Procedure. Across studies, the general procedure meant that upon arrival to the lab, participants read an information brochure and provided informed consent. After answering some demographic questions, participants were randomly assigned to one of the exposure conditions. Participants completed implicit outcome measures first, followed by the explicit measures. Measures

that directly referred to identity (feminist identification and women's identification) were always completed last. At the end of the study, participants completed a funnelled debriefing. None of the participants guessed the hypotheses. For the procedure per study, please refer to Figure 3a. An overview of which measures were included in which study can be found in Table 3b.

Analytical procedure. The simple effect of central interest is how (counter-) stereotype exposure and the identification variables, affect evaluations of women *relative to men*. Theoretically speaking, we consider this the most relevant comparison, as several of our measures concern in-group bias, as indicated by more favourable ratings of the in-group *compared to an out-group*. Moreover, this allows us to start the breakdown of interactions with the between-participants variables (exposure condition, and identification) before moving on to the within-participants variables (target valence, and gender of the prime). Following this strategy means that the gender of the prime is the simple effect of central interest in the analyses presented below.

The reaction time data were filtered according to a pre-determined cut-off. Responses below 300 ms and above 1500 ms were excluded (Ratcliff, 1993). Subsequently, responses that fell more than 3SD above the mean were also excluded. The data was analysed using a linear mixed model with crossed random effects (Baayen, Davidson, & Bates, 2008). Random factors were subject and target type. Moreover, in the pooled analysis we controlled for the influence of different studies.

Preliminary analyses. Though feminist identification and women's identification are used as predictors in this study, they were measured after the manipulation, so as not to alert participants to the nature of the experiment. Therefore, we examined whether feminist identification and women's identification were affected by the manipulation, but this was not the case (Fs<1). Further, feminist identification (M=3.01, SD=1.33) and women's identification (M=5.10, SD=1.02) were found to correlate weakly (r=0.17), confirming that they measure different aspects of gender identity, in line with findings of Chapter 2. Feminist identification and women's identification are used as continuous variables in all analyses described below. When they interact, these interactions are described with reference to the gender taxonomy described above (i.e. those who identify strongly with feminists, but not women, are referred to as "distinctive feminists"). However, we did not create subgroups for the analysis; the taxonomy is theoretical, arising from the interaction between the continuous identification measures.

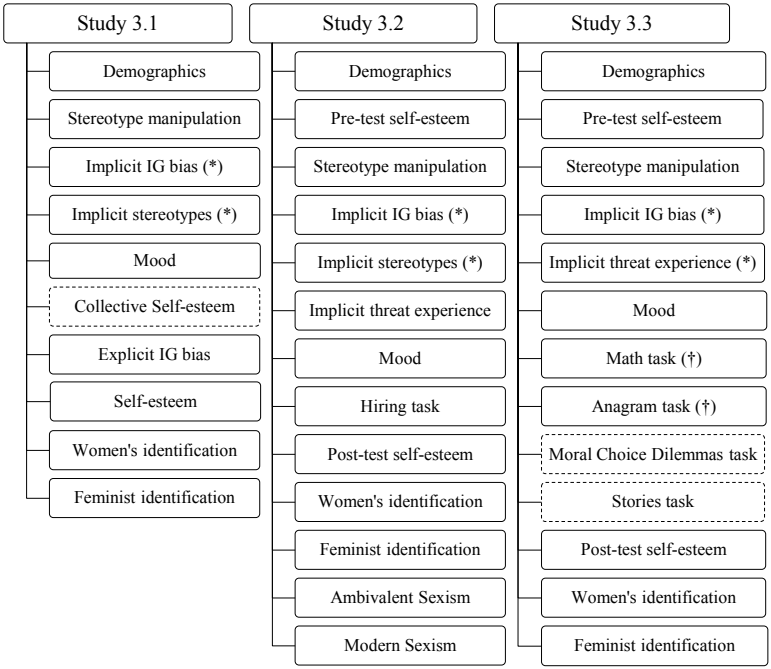
Table 3a.
Sample information per Study

Study	Total N	Average age	Age range
Study 3.1	46	19.2 years old	17-29 years old
Study 3.2	101	21.3 years old	17-47 years old
Study 3.3	243	22 years old	18-43 years old

Table 3b.
Outcome measures per study.

		Study 3.1	Study 3.2	Study 3.3	Pooled analysis
Implicit measures	Implicit in-group bias	x	x	x	x
	Implicit stereotypes	x	x		x
	Implicit threat experience		x	x	x
Indirect measures	Persistence – Math task			x	
	Persistence- Anagram task			x	
Explicit measures	Self-esteem	x	x	x	x
	Mood	x	x	x	x
	Explicit in-group bias	x	x		
	Modern Sexism		x		
	Ambivalent sexism		x		

Figure 3a: Procedure per study.



NB: Measures with an asterisk (*) or obelisk (†) were counterbalanced. Dashed measures are described in the supplementary materials.

Results & Discussion

The results are organized by task rather than by study, because the pooled analyses include data from several studies. We report all measures, manipulations, and exclusions in these studies, either in this section or the supplementary materials.

Implicit threat experience. As a first step, we examined whether the manipulation produced threat, through an approach-avoidance task (De Houwer et al., 2001). We expected that distinctive feminists would experience threat after exposure to implicit stereotypes, as indicated by faster avoidance of threat targets. This should result in a 5-way interaction between (counter-) stereotype exposure, feminist identification, women's identification, direction of the response (approach/avoid) and target category (threat/neutral).

Pooled analysis. Instead of the 5-way interaction, results showed a 4-way interaction between exposure condition, feminist identification, direction of response, and target category ($F(1,37564)= 13.52$, $p<0.001$). This interaction is represented in Figure 3b. Breakdown of the interaction showed that responses to threat targets were affected by an interaction between exposure condition, feminist identification, and direction of response, $F(1,37579)=9.58$, $p=0.002$. Further breakdown showed that in the stereotype condition there was an interaction between direction of response and feminist identification, ($F(1,37564)=10.30$, $p=0.001$), such that compared to low feminists, exposure to stereotypes leads high feminists to approach threat more slowly (M_{diff}=10.71 ms, $F(1,37564)=4.94$, $p=0.026$, d =0.22), and avoid threat more quickly (M_{diff} = -14.87 ms, $F(1,37564)=9.59$, $p=0.002$, d =0.31). This finding indicates that, relative to the experience of low feminist identifiers, exposure to implicit stereotypes leads high feminist identifiers to experience threat. However, our hypothesis was that this will be particularly true for distinctive feminists. Although the 5-way interaction including women's identification was not significant, we examined the hypothesized simple effect reflecting the difference between distinctive feminists and dual identifiers. This difference did not reach significance ($F<1.18$, $p>0.28$), showing that distinctive feminists and dual identifiers experience similar levels of threat following implicit stereotype exposure.

A further interaction with the term Study ($F(3,37572)=2.74$, $p=0.008$) showed that, though the patterns were similar across studies, the strength of the simple effects we focus on differed somewhat across studies. More details can be found in Table 3c.

Implicit stereotyping. We subsequently examine how implicit (counter-) stereotype exposure affects (counter-)stereotypical associations. We expected that, following implicit stereotype exposure, distinctive feminists would associate women with counter-stereotypical traits (de Lemus et al., 2013), as a form of resistance. This should result in a 5-way interaction between (counter-)stereotype exposure, feminist identification, women's identification, gender of the prime and target category (warmth/competence).

Pooled analysis. Instead of the 5-way interaction, results showed a 4-way interaction between exposure condition, feminist identification, gender of the prime, and target ($F(1,15597)=4.25$, $p=0.039$). This interaction is represented in Figure 3c. Breakdown of the interaction showed that, in the stereotype condition, there was an interaction between feminist identifica-

tion, target category, and the gender of the prime (F(1,15598)=4.57, p=0.033). Further examination of this interaction showed that in the stereotype condition, low feminists' responses were affected by an interaction between target category and the gender of the prime, F(1,15597)=13.43 , p<0.001. More specifically, after stereotype exposure, low feminist identifiers responded faster to warmth targets when they were preceded by a *female* rather than a male prime (M_{diff}= 17.16 ms, F(1,15597)=9.15, p=0.002, d =0.36). The reverse was true for competence targets: after stereotype exposure low feminists responded faster to competence targets when they were preceded by *male* rather than female primes, M_{diff}=12.29 ms, F(1,15597) =4.66, p=0.031, d =0.26. A summary of the simple effects is shown in Table 3d. In sum, there was no evidence for resistance. Instead, implicit stereotype exposure led to *more* stereotypical in-group associations amongst low feminist identifiers.

There was no evidence for a further interaction with the term Study (F<1), indicating that the simple effects described above were similar in both studies.

The results discussed so far show that implicit stereotype exposure leads low feminist identifiers to show more stereotypical gender associations, and leads *high* feminist identifiers to experience threat. We now examine how implicit stereotype exposure affects implicit in-group bias, performance, and persistence.

Implicit in-group bias. We expected that distinctive feminists who are exposed to implicit stereotypes will show implicit in-group bias as a form of resistance. That is, we expect distinctive feminists to associate positive targets with their in-group more than the out-group. This should result in a 5-way interaction between (counter-)stereotype exposure, feminist identification, women's identification, gender of the prime and target valence (positive/negative).

Pooled Analysis. The results showed that the implicit in-group bias measure produced the predicted 5-way interaction between exposure condition, feminist identification, women's identification, gender of the prime, and target valence, F(1,43899)=4.33, p=0.037. This interaction is represented in Figure 3d. The breakdown of the interaction showed that, in the stereotype condition, there was an interaction between target valence, feminist identification, women's identification and the gender of the prime (F(1,43899)=9.19, p=0.002). This interaction was not present in the counter-stereotype condition (F<1). Further examination interaction present in the stereotype con-

dition showed that responses to positive targets were affected by an interaction between feminist identification, women's identification and the gender of the prime ($F(1,43900)=16.74$, $p<0.001$). Further breakdown meant that amongst high feminists, women's identification interacted with the gender of the prime ($F(1,43901)=18.27$, $p<0.001$). Specifically (and as predicted): distinctive feminists responded faster to positive targets when preceded by a female rather than male prime (M_{diff}=12.254 ms, $F(1,43901)=5.20$, $p=0.023$, $d = 0.23$). This pattern is reversed amongst dual identifiers (M_{diff}=-18.45 ms, $F(1,43901)=19.20$, $p<0.001$, $d = 0.34$). The finding that dual identifiers show out-group bias on positive targets is perhaps surprising, and we return to this issue in the General Discussion. Similar to the dual identifiers, non-identifiers who were exposed to implicit stereotypes also responded faster to positive targets when preceded by a male prime compared to a female prime (M_{diff}=9.24 ms, $F(1,43899)=5.11$, $p=0.024$, $d = 0.23$). The responses of the distinctive feminists differs significantly from the dual identifiers ($F(1,43901)=18.27$, $p<0.001$), and non-identifiers ($F(1,43899)=6.01$, $p=0.014$). An overview of the simple effects can be found in Table 3e.

There was no evidence for a further interaction with the term Study ($F<1$), indicating that the simple effects described above were similar across studies.

Taken together, the results showed that the responses of the distinctive feminists are significantly different from those of the dual and non-identifiers. While the distinctive feminists show implicit in-group bias after exposure to implicit stereotypes, dual and non- identifiers show implicit *out-group* bias after exposure to stereotypes. Thus, distinctive feminists resist implicit stereotype exposure through implicit in-group bias.

Behavioural resistance: Math task. We expected that, after exposure to implicit stereotypes, distinctive feminists perform better and persist longer in a counter-stereotypical domain. This should result in a 3-way interaction between feminist identification, women's identification and exposure condition. The math task included 9 solvable items, of which participants correctly completed 5.78 on average (SD=1.87). For the unsolvable item, participants persisted for an average of 17.30 s (SD=16.33).

Performance on the math task was not affected by exposure condition, women's identification or feminist identification (F-values below $F<1.34$, $p>0.24$). That is, there was no evidence that implicit identity threat lead to a stereotype threat effect, or resistance.

However, *persistence* on the unsolvable item was affected by a 3-way in-

teraction between exposure condition, feminist identification and women's identification $F(1,226)=6.45$, $p=0.012$, as shown in Figure 3e. Simple slopes analysis showed that distinctive feminists persist longer in the stereotype than the counter-stereotype condition, $M_{diff}=12.90$ s, $F(1,226)=5.78$, $p=0.017$, $d=0.19$, and persisted longer than did the other groups of women, $F(1,226)=7.07$, $p=0.008$, $d=0.31$. No other terms reached significance.

In sum, the hypothesis that distinctive feminists would persist after exposure to implicit stereotypes was confirmed, but the hypothesis regarding improved performance was not. The reason why persistence showed the expected result, while performance did not, may simply be due to reality constraints: if one does not know the solution to a problem, motivation alone is not sufficient for increased performance, as is the case for persistence. These findings are in line with findings by de Lemus et al. (2016) who used a paradigm similar to the one used here to expose women to stereotypical gender roles, and found that this led women to persist on a visual-spatial task, which, like mathematics, is stereotypic for men and a counter-stereotypical domain for women.

Behavioural resistance: Anagram task. As for the math task, we examine whether performance and persistence on the anagram task are affected by exposure to implicit stereotypes, feminist identification and women's identification. This should result in a 3-way interaction between feminist identification, women's identification and exposure condition. Of the 9 solvable anagrams, participants correctly completed 6 on average ($SD=2.14$). For the unsolvable item, participants persisted for an average of 44.87s ($SD=36.81$). Neither performance nor persistence on the anagram task were affected by exposure condition, or its interactions with women's identification or feminist identification (Fs<1.94, ps>0.16).

The finding that distinctive feminists show persistence on the math task, but not on the anagram task can be seen as an additional indicator that the persistence we see on the math task is the product of a motivational process aimed at counteracting stereotypes. As noted above, mathematics is generally considered a stereotypically male ability (Brandell & Staberg, 2008; Deaux, 1985; Nosek, Banaji, & Greenwald, 2002), suggesting that exposure to implicit stereotypes motivates distinctive feminists to perform well in a stereotypically male domain as a way of disproving gender stereotypes.

Explicit measures. We included a number of explicit measures for comparison purposes, to examine whether implicit stereotypes lead to explicit

resistance, or perhaps have detrimental effects on perceived sexism, mood or self-esteem (Barrett et al., 2010; Rudman et al., 2007). Results showed no evidence for resistance, but also no evidence for detrimental effects on explicit measures. Significant effects that are unrelated to the manipulation (e.g. main effects of identification) are described in the supplementary materials.

Explicit in-group bias. A measure of explicit in-group bias was included in both Study 3.1 and 3.2, but these were different measures (Decomposed Games and hiring task), and therefore they are analysed separately.

Study 3.1. Study 3.1 found no evidence for explicit in-group bias in the Decomposed Games: implicit stereotype exposure, feminist identification, women's identification and their interactions did not affect resources allocated to women versus men (*Fs*<1.57, *ps*>0.21).

Study 3.2. Likewise, in Study 3.2, there was no evidence for explicit in-group bias in the hiring task: implicit stereotype exposure, feminist identification, women's identification and their interactions did not affect ratings of the female versus male candidate (all *Fs*<2.24, *p*>0.13), or ratings of women and men "in general" (*all F*s<2.37, *p*>0.12).

Taken together, these findings show that the in-group bias found on the implicit measures is not present on explicit measures.

Self-esteem. Results from the pooled analysis showed no effect of implicit stereotype exposure on self-esteem, either as a main effect on in interaction with women's and feminist identification (*Fs*<1.52, *ps*>0.21).

Mood. Results from the pooled analysis showed that implicit stereotype exposure led to higher mood ratings (both positive and negative; $F(1,389)=5.95$, $p=0.015$, $d=0.12$). No other terms reached significance (*Fs*<3.087, *ps*>0.08). As previous research has identified anger as a particularly relevant indicator of explicit resistance (Barreto et al., 2010), it was analysed separately from the other mood items. Results showed no evidence that participants report more anger after exposure to implicit stereotypes (*Fs*<2.76, *ps*>0.1).

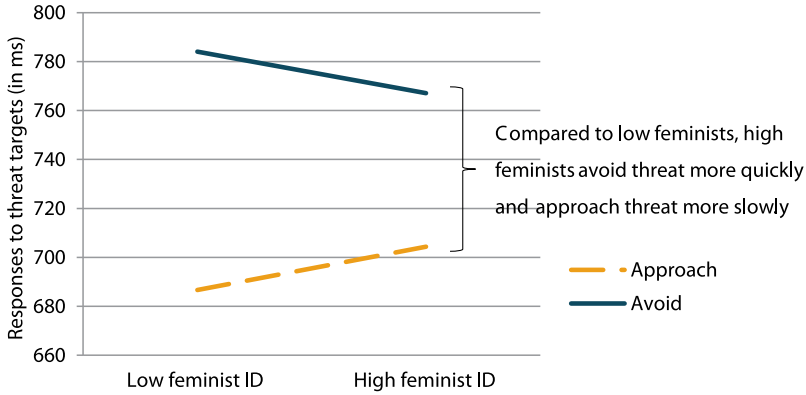
Modern Sexism. Results showed no effect of implicit stereotype exposure on Modern Sexism, either as a main effect on in interaction with women's and feminist identification (*F*s<2.75, *p*>0.1).

Ambivalent Sexism. Exposure to implicit stereotypes did affect endorsed sexism: there was a marginal interaction between exposure and feminist identification on both hostile ($F(1,101)=3.64$, $p=0.060$), and benevolent sexism ($F(1,101)=3.19$, $p=0.077$). Feminist identifiers endorsed less sexism after exposure to counter-stereotypes compared to stereotypes (Hostile: $F(1,101)=5.06$,

p=0.027, d=0.22; Benevolent: F(1,101)=7.41, p=0.011, d=0.26). That is, exposure to implicit counter-stereotypes reduces endorsement of sexism amongst high feminist identifiers.

Summary and Conclusions. Taken together, data presented in this chapter show that exposure to implicit stereotypes leads low feminist identifiers to think more stereotypically about their group. Moreover, exposure to implicit stereotypes leads high feminist identifiers to experience threat. Although distinctive feminists and dual identifiers show the same threat response, only distinctive feminists - those who are highly identified with feminism but not women - subsequently resist this threat, through implicit in-group bias and persistence in a counter-stereotypical performance domain. Thus, our hypothesis that distinctive feminists can resist implicit identity threat is confirmed.

Figure 3b. Responses to threat targets following stereotype exposure (pooled analysis).

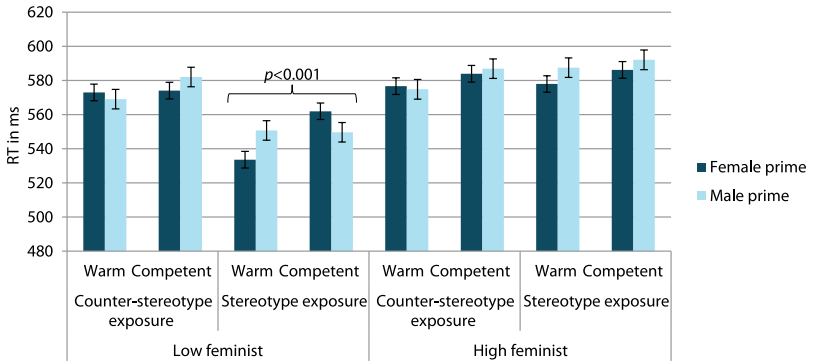


NB: Low and high identification with feminists is plotted at ± 1 standard deviation from the mean.

Table 3c.
Information on simple effects in the threat experience task per study. Are the simple effects that were significant in the pooled analysis significant in the individual studies?

Study	Condition	Target	Direction	Simple effect: β-estimate for feminist ID	F-value	p-value
2	Stereotype	Threat	Avoid	β= -30.19	36.48	p<0.001
			Approach	β= 1.31	F<1	p=0.794
3	Stereotype	Threat	Avoid	β= -1.94	F<1	p=0.536
			Approach	β= 9.06	4.23	p=0.040

Figure 3c. Responses in the lexical decision task (pooled analysis).



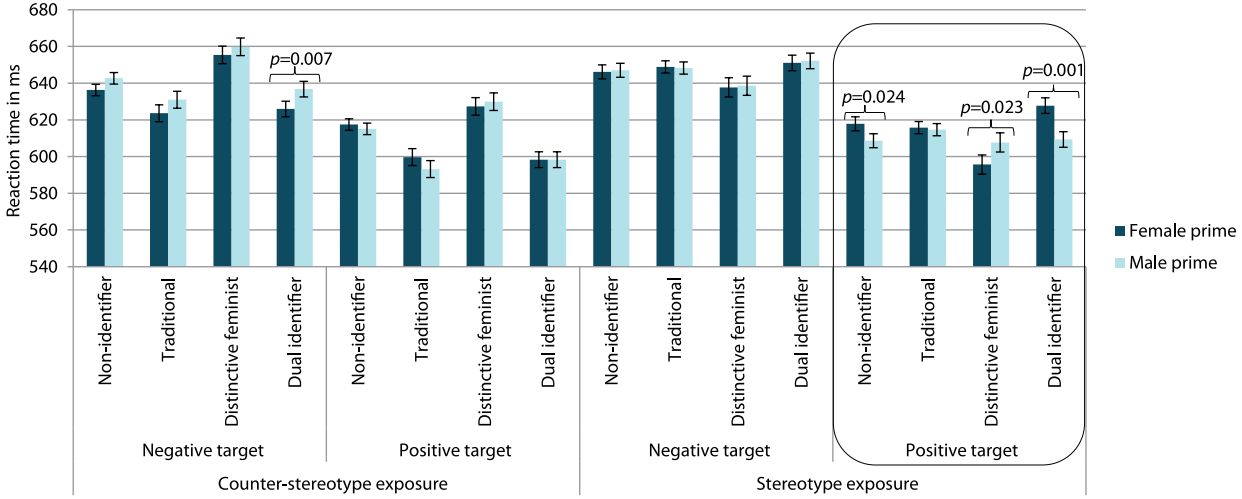
NB: Faster responses indicate greater accessibility of the association. Error bars represent 1 standard error. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Table 3d.
Simple effects in the implicit stereotyping task (pooled analysis).

			RT					CI 95%		Effect size
Exposure	**Target**	**Feminist ID**	**Female prime**	**Male prime**	**M_{diff}**	***F*-value**	***p*-value**	**Lower**	**Upper**	**Cohen's d**
Counter-Stereotype	Warm	Low	572.95	569.04	3.91	0.51	0.473	-6.77	14.59	0.09
		High	576.70	574.83	1.87	0.13	0.718	-8.28	12.02	0.04
	Competent	Low	574.01	581.98	-7.97	2.14	0.144	-18.66	2.72	0.17
		High	583.92	586.85	-2.93	0.31	0.575	-13.17	7.31	0.07
Stereotype	Warm	Low	533.60	550.75	-17.15	9.14	0.003	-28.27	-6.03	0.36
		High	577.91	587.49	-9.59	2.69	0.101	-21.05	1.88	0.19
	Competent	Low	561.96	549.65	12.30	4.67	0.031	1.15	23.46	0.26
		High	586.17	592.07	-5.91	1.03	0.309	-17.29	5.48	0.12

NB: The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Figure 3d. The results of the implicit in-group bias measure (pooled analysis).



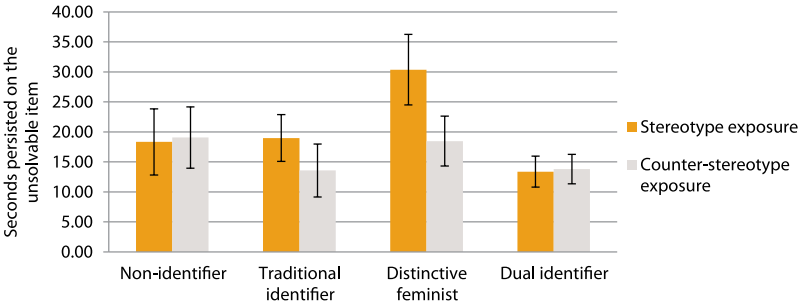
NB: Faster responses indicate greater accessibility of the association. Error bars represent 1 standard error. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Table 3e. Simple effects in the in-group bias task (pooled analysis).

			RT					CI 95%		Effect size
Exposure	**Target**	**Identification**	**Female prime**	**Male prime**	**M_{diff}**	***F*-value**	***p*-value**	**Lower**	**Upper**	**Cohen's d**
Counter-Stereotype	Negative	Non-identifier	635.08	641.44	-6.37	3.53	0.060	-13.01	0.27	0.19
		Traditional identifier	623.94	631.34	-7.40	2.73	0.098	-16.18	1.38	0.17
		Distinctive feminist	655.54	659.64	-4.10	0.77	0.381	-13.28	-5.07	0.09
		Dual identifier	626.18	636.99	-10.81	7.19	0.007	-18.71	-2.91	0.27
	Positive	Non-identifier	616.74	614.29	2.45	0.52	0.469	-9.09	4.19	0.07
		Traditional identifier	599.12	592.58	6.54	2.15	0.143	-2.21	15.30	0.15
		Distinctive feminist	627.39	629.85	-2.47	0.28	0.594	-11.53	6.60	0.05
		Dual identifier	598.97	598.99	-0.20	0.01	0.996	-7.88	7.84	0.00
Stereotype	Negative	Non-identifier	648.18	649.06	-0.89	0.05	0.828	-8.90	7.13	0.02
		Traditional identifier	650.64	650.01	0.63	0.02	0.887	-8.07	9.33	0.01
		Distinctive feminist	642.35	643.02	-0.67	0.02	0.903	-11.34	10.01	0.01
		Dual identifier	654.90	656.08	-1.18	0.08	0.781	-9.53	7.16	0.03
	Positive	Non-identifier	619.47	610.23	9.24	5.11	0.024	1.23	17.25	0.23
		Traditional identifier	616.95	615.82	1.13	0.07	0.798	-7.52	9.78	0.03
		Distinctive feminist	**600.43**	**612.68**	**-12.25**	**5.20**	**0.023**	**-22.79**	**-1.72**	**0.23**
		Dual identifier	631.94	613.48	18.45	19.20	0.001	10.20	26.71	0.34

NB: Aside from the simple effects described in the main text, this table also shows some significant differences in the counter-stereotype condition: dual identifiers respond quicker to female-negative pairs than to male-negative pairs. However, the interaction between the gender of the prime and the identification variables is not significant in this condition ($F<1$). That is, the other groups of women show the same effect as dual identifiers, though these do not reach significance. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

Figure 3e. Persistence in the Math task.



NB: Error bars represent 1 standard error. The identity subgroups are created by plotting low and high identification with women and feminists at ± 1 standard deviation from the mean.

General Discussion

Previous studies suggested that implicit stereotypes cannot be resisted but instead lead to stereotype consistent behavior (Barreto et al., 2010; Kray et al., 2001). Indeed, results from this study confirm that low feminist identifiers do make more stereotypical associations with women after exposure to implicit stereotypes. Importantly, however, the current studies suggest that resistance to implicit stereotypes can still occur, albeit through implicit strategies. More specifically, "distinctive feminists", who are strongly identified with feminists but not the broader group of women, were found to resist implicit stereotypes of their gender in-group through implicit in-group bias, and increased persistence in a stereotypically male domain.

We defined "resistance" as a motivational process that leads to responses that ostensibly *counteract* social identity threat. We observed that exposure to implicit stereotypes elicited implicit in-group bias and persistence amongst distinctive feminists, and we believe that both these responses *counteract* identity threat. Implicit in-group bias counteracts identity threat by re-asserting group value. Likewise, persistence in counter-stereotypical performance domains reflects a motivation to disprove stereotypes. Importantly, these responses do not assimilate to the threat, but instead go against the direction of priming. That is, we believe that both implicit in-group bias and persistence may be used to disprove or assuage identity threat, and as such these different measures provide converging evidence for resistance to implicit identity threat.

The finding that only distinctive feminists resist exposure to stereotypes raises the question of why this is the case. Distinctive feminists are known to be sensitive to gender stereotypes, rating them as more problematic than do other groups of women (including dual identifiers, see Chapter 2). As a consequence, given that gender stereotypes are pervasive in society, feminist identifiers might often be confronted with identity threat. When they see advertisements or hear jokes invoking stereotypes of women, these likely contribute to an experience of (sometimes implicit) social identity threat in their daily lives. In line with this reasoning, research has shown that repeated exposure to threat may lead an individual to become increasingly sensitive to subtle threat cues (Kaiser et al., 2006), which may in turn lead them to develop more sophisticated and diverse resistance responses (Miller & Kaiser, 2001). The diversity of distinctive feminists' resistance responses is underlined by recent work from our lab' showing that, aside from persistence and implicit in-group bias reported here, resistance can also take the form of out-group derogation. In a line of studies examining out-group focused resistance responses, we showed that exposure to implicit stereotypes increased distinctive feminists' (greater) willingness to sacrifice men in a Moral Choice Dilemma paradigm (see Chapter 4). These findings show that resistance to implicit identity threat is not only possible, but can be expressed in different ways. Specifically, distinctive feminists' sensitivity to gender stereotypes may translate to increased experience of and ability to cope with social identity threat, even when it occurs at an implicit level.

The responses of the dual identifiers, those who are highly identified with both feminists and women, may seem somewhat surprising. Although we did not expect them to react to the stereotypes in the same way as distinctive feminists, there was evidence that they experienced implicit social identity threat following exposure to implicit stereotypes. However, instead of resisting, they show implicit *out-group bias* following exposure to implicit stereotypes. That is, exposure to implicit stereotypes makes positive associations with women less accessible for them than positive associations with men, which is more than simply the absence of resistance. In explaining this finding it is worth noting that Chapter 2 showed that high women's identification is related to a perception of being personally quite feminine. That is, dual identifiers may have internalized certain components of gender stereotypes and view them as positive, unlike distinctive feminists. If it becomes evident that these self-aspects are part of a system of social roles in which the in-group is dis-

advantaged (stereotype condition), this may not only lead to experiences of threat, but also disrupt the processing of in-group positive associations. Thus, confrontation with the negative aspects of stereotypes is more compromising for women that embrace them as part of the self. Though speculative, this line of reasoning could explain dual identifiers' relatively longer latencies for female-positive associations after exposure to implicit stereotypes.

Given the complexities of gender identity, it is worthwhile considering the external validity of these findings. The specifics of what constitutes threat differ between groups, and as a result it stands to reason that a manipulation that produces resistance in one group will not necessarily do so amongst other groups. Nevertheless, there is evidence that the underlying principles of resistance as a way of counter-acting implicit threat do apply beyond the gender context. Recent research from our lab' showed evidence for resistance to implicit stereotypes in the context of national identity in Spain (see Chapter 5). Spanish participants who were exposed to implicit in-group stereotypes used to legitimise the economic crisis, responded with implicit in-group bias. These findings indicate that, despite differences in the precise circumstances, the principle of resistance to implicit identity threat applies outside the gender context.

The motivational, rather than cognitive, basis for the effects reported in these studies is evidenced by the fact that resistance is found only amongst the distinctive feminists, who were expected to be most motivated to resist stereotypical gender associations. Additionally, the findings on implicit in-group bias were supported by findings on a behavioural persistence measure, which has been described as a 'hallmark' of motivational processes such as goal pursuit (Bargh et al., 2001; Gollwitzer & Schaal, 2001). Internally motivated goals and goals that serve psychological functions have more behavioural consequences than externally imposed or instrumental goals (Gollwitzer & Bargh, 1996). Thus, the fact that the effects of implicit threat are also evident on behavioural measures supports the notion that implicit resistance is a motivational process with the goal of contesting stereotypes. Moreover, as motivational effects are less susceptible to rapid decay than cognitive effects (Förster, Liberman, & Friedman, 2007; Kuhl, 1987), the occurrence of behavioural persistence following stereotype exposure further suggests that this is part of a motivational process. For these reasons, cognitive salience or related explanations cannot readily account for the findings of these studies. Instead, we believe that motivated resistance provides the most fitting expla-

nation.

Implicit identity threat based on stereotype exposure affected in-group bias even though the stereotypes were selected to be neutral in valence. This underscores the notion that the negative experience of stereotypes is produced by the *stereotypic* content, rather than the inherent negativity often associated with stereotypes. These findings are in line with research on benevolent sexism (e.g. Moya et al., 2007) showing that even when the evaluation implied by a stereotype is positive, this can still have negative implications, for example for agency (de Lemus, Spears, van Breen, & Telga, 2016).

A further issue worth noting is that previous research has found implicit resistance on both evaluative and stereotypical dimensions (de Lemus et al., 2013; de Lemus et al., 2017; Ramos et al., 2015). In our study, however, we found that distinctive feminists resist implicit stereotypes through *evaluative* in-group bias, but there was no evidence that people resist implicit stereotypes by associating the in-group with counter-*stereotypical* attributes (see de Lemus et al., 2013). This may be because the threat occurs on the stereotype dimension, and therefore resistance on this dimension is subject to the reality constraint that participants have just "seen the proof" of the truth of stereotypes on this dimension and (although unconscious), this may make it more difficult to contest (see Spears et al. 2001; 2010 for a discussion of social reality constraints). Therefore, participants may require an alternative dimension on which to resist, akin to identity affirmation (Sherman & Cohen, 2002). Alternatively, the finding may be due to the fact that the manipulation was implicit. There is evidence that evaluative judgments are more primary than content-based judgments (T. S. Saunders & Buehner, 2013; Zajonc, 1980). Therefore, something as subtle as implicit identity threat may be more likely to trigger evaluative judgments than more complex content-based (counter-stereotypical) judgments.

Regarding the explicit measures, none of the effects found revealed explicit resistance. There are several possible explanations for this. Firstly, the effects of the manipulation may have worn off by the time the explicit measures were completed, as explicit measures were administered towards the end of the study. However, there are no indications that effects on later measures are weaker overall, as there were some effects on measures that were presented towards the end of each study. Alternatively, it may be the case that implicit threat is simply too subtle to elicit explicit resistance. The fact that implicit threat cannot be consciously evaluated or attributed to any source

(Major et al., 2003) makes explicit resistance strategies such as anger, protesting and explicit in-group bias less viable. The finding implicit nature of the stereotype exposure may also be the reason why identification is such an important factor in this study. While previous research (de Lemus et al., 2013; de Lemus et al., 2017) has found main effects of identity threat, in this study the effects of identity threat are moderated by women's and feminist identification. As the threat manipulation is very subtle, this may mean that only those participants who are specifically attuned to these particular threats are able and willing to resist.

One remaining question is whether resistance is functional in reducing threat. The notion that resistance could reduce the subsequent experience of threat is theoretically compatible with the idea of resistance. However, we do not believe that resistance should *necessarily* reduce threat directly. Instead, resistance may protect against detrimental effects of threat (for instance on self-esteem or negative emotion; Barreto et al., 2010), without reducing the experience of threat itself. For instance, the beneficial effects of resistance can lie in the feeling of "having done something", increasing feelings of empowerment and efficacy (e.g. Cocking & Drury, 2004; Drury & Reicher, 2005 for examples in the context of collective action) without necessarily making the threat itself less acute. Indeed, it may be important to remain vigilant to the threat. Alternatively, rather than reducing the threat in a particular instance, resistance may serve to build up resilience and efficacy to confront *future* instances of threat. As the current study could not address this issue directly, we believe that examining the beneficial effects of implicit resistance in an important avenue for future research.

In conclusion, these studies suggest that implicit social identity threat can be resisted through implicit strategies. While there is much evidence that stereotyping may occur implicitly (see for instance Blair, 2002; Gaertner & McLaughlin, 1983; Pearson et al., 2009), the current paper provides the first evidence that *resistance* to implicit stereotyping may also occur implicitly. Just as a healthy physical immune system might resist a pathogen automatically, some people (i.e. distinctive feminists in this case) may develop subtle psychological resistance mechanisms that function outside of conscious awareness. Analogous to a healthy diet boosting the immune system, those who are attuned to potential identity threat may have more developed automatic defences than others. More broadly, the studies presented here add to the literature on breaking down stereotypes (e.g. Kawakami et al., 2000),

by showing motivated resistance on the part of the *victims* of stereotypes. In sum, it seems that when it comes to protecting a valued social identity, people may be more resilient than previously thought.

4

Resisting implicit identity threat by sacrificing men: Women who do and women who don't

Note: This chapter is based on van Breen, J.A., Spears, R., Kuppens, T., & de Lemus, S. (2017). Resisting implicit identity threat by sacrificing men: Women who do and women who don't.

Abstract

In this chapter, we examine responses to implicit gender stereotypes (i.e. stereotypes present outside conscious awareness) and argue that women can use the decision to sacrifice men in a Moral Choice Dilemma task (MCD; Thompson, 1986) as a way of resisting implicit stereotypes. We hypothesise that "distinctive feminists", women who identify strongly with feminists but not women, are motivated to resist implicit stereotypes because they create implicit social identity threat, and can do so in two ways. Firstly, they could resist the *over*valuation of men implied by stereotypes through out-group derogation that is, by more readily sacrificing men after implicit stereotype exposure. Secondly, they could resist the *under*valuation of women through in-group favouritism, that is, by *less* readily sacrificing women. The data supported the first hypothesis: distinctive feminists sacrificed men more readily after exposure to implicit stereotypes compared to implicit counter-stereotypes, whereas other women did not. These findings show that distinctive feminists can resist implicit gender stereotypes through out-group derogation.

Stereotypes are harmful for low-status groups because they suggest that status differences result from "real" differences between groups, and thereby legitimise inequality. For example, men are stereotyped as competent (Fiske et al., 2002) and attributed more social value, status, and respect than women (Ridgeway, 2001). Cross-cultural research has shown that men are stereotypically associated with those traits that are socially valued. In societies that value communal traits, men are stereotyped as communal, while in societies that value agentic traits, men are stereotyped as agentic (Cuddy et al., 2015). Such findings confirm the notion that stereotypes are not so much about describing the traits of a group, but rather a way of conveying social value. Thus, stereotypes can threaten the identity of undervalued groups, and as a result members of these groups may be motivated to disconfirm stereotypes (Spears, Jetten & Doosje, 2001). Importantly, however, stereotypes can be present at the implicit level, that is, outside of the participant's awareness. Such implicit stereotypes are more difficult to recognize and therefore more difficult to confront (e.g. Kray et al., 2001). In fact, implicit stereotypes often elicit stereotype-conformity (Barreto et al., 2009; Kray et al., 2001). For instance, implicit stereotypes can lead women to adopt more submissive bodily postures (de Lemus et al., 2012), and request more dependency-oriented help (Shnabel et al., 2015). In this study, we examine factors that may nevertheless allow women to *resist* implicit gender stereotypes.

We define "resistance" as a motivational process that leads to responses that *counteract* social identity threat. Resistance does not imply automatic contrast to just any stimulus, but targets specific stimuli that are threatening to social identity. Defined in this way, resistance is an identity management strategy (Spears, Jetten, & Doosje, 2001): An individual is confronted with a certain status quo, and the implications of this status quo for social identity needs to be managed so that negative consequences are minimized, and positive identity can be maintained.

But who resists social identity threat? In the case of gender, feminist identification is particularly relevant. Feminist identification predicts perceptions of gender inequality (see Chapter 2), activism (Liss et al., 2004), and politicization (Becker et al., 2011; Simon & Klandermans, 2001). A second factor that affects gender attitudes and resistance behaviours is identification with women as a group. Chapter 2 showed that high women's identifiers are more satisfied with group membership, and more likely to self-stereotype (see also Leach et al., 2008). Given that feminist identifi-

cation and women's identification showed only a small inter-correlation (Leicht, Gocłowska, van Breen, de Lemus, & Randsley de Moura, 2017; Roy et al., 2007), we can identify four theoretical "types" of gender identifiers (see Chapter 2, but also Condor, 1986; Becker & Wagner, 2009). Importantly, these are not discrete subgroups, but are instead intended to facilitate interpretation of how the different identification variables may be combined. The first group score low on women's and feminist identification, a group we call "non-identifiers". At the opposite end of the spectrum, there are those who identify highly with women, but are also strong feminist identifiers: the "dual identifiers" (see Leicht et al., 2017). The group who identify strongly with women, but not feminists are referred to as "traditional identifiers" (cf. Condor, 1986). Finally the group who score low on women's identification, but highly on feminist identification we refer to as distinctive feminist identifiers or "distinctive feminists" for short. Crucially for the current study, the interaction between feminist identification and women's identification predicts attitudes towards gender stereotypes: distinctive feminists find gender stereotypes more problematic than do other groups of women (see Chapter 2). This increased concern with gender stereotypes amongst distinctive feminists may facilitate resistance when stereotypes are implicit, as general concern with sexism is known to increase sensitivity to subliminal instances thereof (Kaiser et al., 2006).

Resistance to implicit gender stereotypes can take different forms. For instance, in terms of behavior, previous research has shown that implicit stereotype exposure leads women to persist in *counter*-stereotypical performance domains (see Chapter 3; also de Lemus et al., 2017). Moreover, implicit stereotypes may be resisted through evaluative responses. To the extent that implicit stereotypes imply that men are valued over women, this could be resisted by *boosting* women, or by *downgrading men*. Indeed, previous research, using the same procedure as the one used in the current study, has shown evidence for the former response: after exposure to implicit gender stereotypes, distinctive feminists were faster to associate positive targets with in-group rather than out-group primes. That is, distinctive feminists show implicit in-group favouritism following exposure to implicit stereotypes (see Chapter 3). In the current study, we examine whether implicit gender stereotypes can also be resisted through out-group derogation, that is, by downgrading men.

The current research. Across two studies, we use a Moral Choice Dilem-

ma (MCD) task (Thomson, 1986) to examine women's evaluations of men and women after exposure to implicit stereotypes versus counter-stereotypes. Female participants read scenarios in which sacrificing either a man or a woman could save a number of others (of unspecified gender), and were asked whether they would make this sacrifice. People tend to be reluctant to derogate others because it is difficult to justify (e.g. Mummendey et al., 1992; Hewstone, Fincham, & Jaspars, 1981). However, the MCD task assuages this concern by the fact that sacrificing saves a greater number of others. Thus, though this task is extreme, sacrificing is morally justifiable in utilitarian terms.

In each scenario, the gender of the person to be sacrificed is manipulated. Thus, in some scenarios, participants are asked to sacrifice a man, and in some scenarios they are asked to sacrifice a woman. As such, responses to the MCD task can show evidence for in-group favouritism and/or out-group derogation. For instance, increased tendencies to sacrifice men would be indicative of out-group derogation (Brewer, 1999). Previous research indeed shows that responses to the MCD task can provide information about the social value given to different groups: socially valued individuals are less likely to be sacrificed (e.g. Cikara et al., 2010; De Dreu, Greer, Van Kleef, Shalvi, & Handgraaf, 2011). As reviewed earlier, men are considered more socially valuable than women, especially when they are stereotypic compared to when they are counter-stereotypic (Ridgeway, 2001). Thus, participants should be reluctant to sacrifice men after exposure to implicit gender stereotypes (compared to counter-stereotypes). However, as distinctive feminists are known to object to gender stereotypes, we expect that they will *resist* implicit stereotypes, by sacrificing men more *easily* after exposure to implicit gender stereotypes than after exposure to implicit counter-stereotypes. Additionally, distinctive feminists might also resist the *under*valuation of women by sacrificing women less readily after exposure to implicit stereotypes (in line with findings from Chapter 3). To distinguish these different resistance strategies, we examine evaluations of men and women separately. That is, while in the previous chapter the central comparison was differences in the evaluations of women as opposed to men, in this chapter the central comparison is differences between the effects of implicit stereotype vs counter-stereotypes exposure. This approach allows us to distinguish resistance through out-group derogation (evaluating the out-group more harshly) from resistance through in-group favouritism (evaluating the in-group more favourably).

Method

The data described here was collected in two separate studies with the same design, and analysed using pooled analysis, also called integrative data analysis (IDA, Curran & Hussong, 2009). This strategy was chosen, firstly, because increased sample size provides better power to detect small effects. Secondly, pooled analysis provides a better understanding of the underlying patterns, as it minimizes the influence of idiosyncrasies in the individual studies. The methods described below apply to both studies, details of the individual studies can be found in the supplementary materials.

Participants. Female participants were recruited from amongst University of Groningen students. Study 4.1 included 121 participants, and Study 4.2 included 252 participants. In each study, the stopping rule used during data collection was a practical one: the number of participants that could be recruited within a 3-week period.

The data from these two studies was pooled because they used the same design, bringing the total sample to 373 female participants. Six participants were excluded due to equipment failure or failure to comply with instructions. The final pooled sample thus included 367 participants. Age ranged from 18 to 45 (M=21.07) years old. With this sample we are able to detect small effect sizes (d≈0.1) at a power of 1-β=0.85 (Faul, Erdfelder, Lang, & Buchner, 2007).

Independent variables.

Implicit stereotype exposure. We exposed participants to either implicit stereotypes or implicit counter-stereotypes by combining subliminal gender primes with gender stereotypical target pictures (adapted from de Lemus et al., 2013). Neither the prime nor the target picture were (counter-)stereotypical in isolation. Instead, (counter-)stereotypes were conveyed by the repeated combination of certain primes with certain target words, such as "woman" paired with "cooking" or "cleaning".

Picture stimuli represented stereotypically masculine and feminine activities, such as shopping, or watching sports on television. The picture stimuli did not show actors of either gender. The pictures were pilot tested, and 20 pictures (5 female-typical leisure activities; 5 female-typical chores; 5 male-typical leisure activities; 5 male-typical chores) were chosen that were considered stereotypically masculine or feminine, but similar in valence. In the stereotype condition the prime "woman" was paired with female stereotypical pictures and the prime "man" with male stereotypical pictures, in 95%

of trials. In the counter-stereotype condition, female primes were paired with a male-stereotypical picture, and male primes with female stereotypical pictures in 95% of trials.

The manipulation consisted of 120 trials. Each trial was composed of a picture, preceded by the prime word "Woman" or "Man". The prime was presented for 42 ms, with supraliminal forward and backward masks (a random letter string, 100ms). Participants answered a question about the target picture ("Is this a leisure activity or a chore?") that was unrelated to gender stereotypes. To control for the effort of response-switching (e.g. Rogers & Monsell, 1995), the number of response-switches was kept constant between participants.

Women's and Feminist identification. Women's and feminist identification were measured with the same 4 items, adapted from Doosje, Ellemers, and Spears (1995; see also de Lemus et al., 2015), such as "Being a woman [feminist] is an important part of how I see myself". Agreement with these items was rated on a 7-point Likert scale. These scales showed high reliability (women's identification $\alpha = 0.85$; feminist identification $\alpha = 0.94$), and only a small inter-correlation ($r = 0.28$). This is in line with previous research showing that women's identity and feminist identity reflect different types of gender identity (Chapter 2, see also Roy et al., 2007). Identification was measured continuously here, and included as such in the analyses presented below. However, to facilitate the interpretation of possible interactions between the identification variables, the tables and graphs refer to the taxonomy described above (non-identifiers; traditional women; dual identifiers; distinctive feminists), plotting the identification effects at ± 1 standard deviation from the mean.

Dependent variable. The dependent variable was the Moral Choice Dilemma (MCD) task, in which participants decide whether they will sacrifice a particular individual to save a group of others (Bauman, McGraw, Bartels, & Warren, 2014; Thomson, 1986). The person that could be sacrificed was either a man or a woman, allowing us to examine whether exposure to implicit stereotypes versus counter-stereotypes affects the tendency to sacrifice men and women.

Recently, Bauman et al. (2014) have noted that the MCD task has limited external validity when used to examine moral judgments. However, we use the MCD task not to examine moral judgments, but to examine the impact of implicit (counter-) stereotypes on the evaluation of men and women (see

also Cikara et al., 2010). We believe using the MCD task has several advantages. Firstly, sacrificing men in the MCD task allows women to counter-act the over-valuation of men implied by stereotypes. That is, the responses afforded by the task fit the motivation induced by the manipulation. Moreover, the MCD task is an indirect measure, in which participants are not made aware of the role played by gender. Therefore, participants' responses are less likely to be affected by conscious correction of gender bias.

Each participant saw 8 scenarios, 4 scenarios in which a man could be sacrificed and 4 in which a woman could be sacrificed, and for each scenario answered the yes/no question "Would you sacrifice this man [woman] to save the others?" The scores for sacrificing were computed by summing the number of scenarios in which participants sacrificed the target individual. There were 2 different versions of the MCD task that counter-balanced the scenarios in which men and women appeared. As the data presented here were collected in two studies, several other outcome measures were included. These measures are described in the supplementary materials.

Procedure. Upon arriving at the lab, participants were seated in individual cubicles. They read general information about the study and the tasks they would complete, and provided informed consent. They then provided demographic information (including gender), after which they saw either the implicit stereotype or counter-stereotype manipulation. After the implicit component of the study, participants completed the MCD task. Finally, participants completed a funnelled debriefing. None of the participants reported awareness of the gender element of either the manipulation or the MCD task.

Analysis. The hypotheses are evaluated with a repeated measures ANOVA. The tendency to sacrifice is the outcome measure, predicted by the gender of the person to be sacrificed as a within-participants variable, and (counter-) stereotype exposure, women's identification and feminist identification as between-subjects variables. The simple effects of interest are 1) the effect of (counter-)stereotype exposure on distinctive feminists' tendency to sacrifice men and 2) the effect of (counter-)stereotype exposure on distinctive feminists' tendency to sacrifice women. The factor Study reflects the different samples that were taken together in the pooled analysis, and is used to control for differences between the samples. We also considered an alternative model with a multilevel structure, in which sacrificing was a binary variable (sacrificed vs. not sacrificed). Results for this model are very similar to results of the repeated measures ANOVA, and can be found in the supplementary materials.

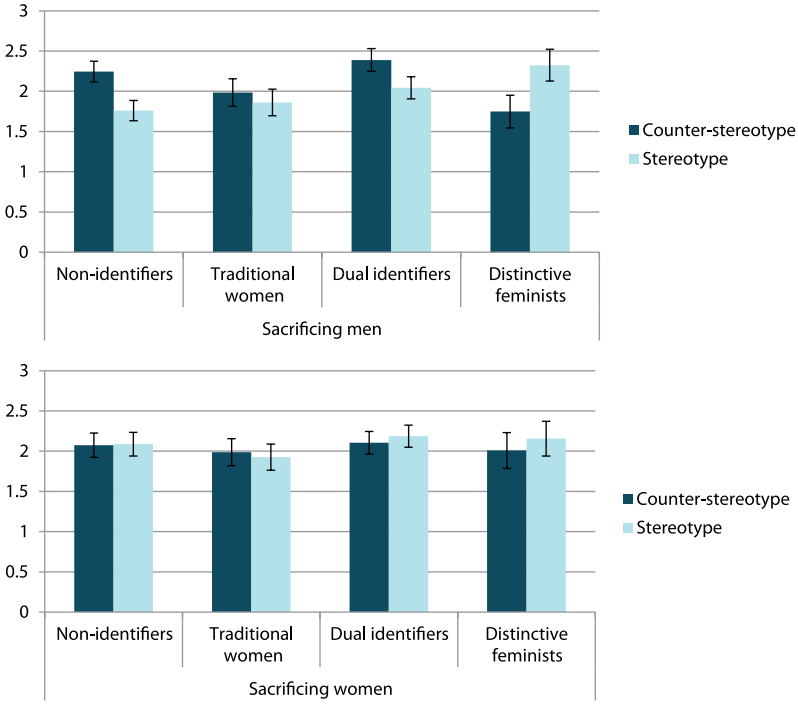
As women's and feminist identification were measured at the end of the study, we examined whether women's and feminist identification were statistically affected by (counter-)stereotype exposure. This was not the case for either feminist (F<2.42, p> 0.16) or women's identification (F<1). Counterbalancing in the MCD task did not produce differences in sacrificing behavior (F<1.34, p> 0.25), and neither did different samples (F<1).

Results

There was no main effect of the gender of the person to be sacrificed (F < 1), that is, participants did not differentiate between women and men when deciding whom to sacrifice overall. The 4-way interaction between gender of the person to be sacrificed, (counter-) stereotype exposure, women's identification and feminist identification did reach significance (F(1,363)= 8.10, p= 0.005). Breakdown of the interaction showed that the interaction between feminist identification, women's identification and (counter-)stereotype exposure affected the sacrificing of men (F(1,363)= 9.88, p= 0.002), but not women (F <1). Further breakdown showed an overall tendency to sacrifice men less readily after implicit stereotype exposure than after implicit counter-stereotype exposure, a finding that is significant amongst non-identifiers (F(1,363)= 6.69, p= 0.010, d= 0.14) and marginally significant amongst dual identifiers (F(1,363)= 2.95, p= 0.087). However, distinctive feminists showed the *opposite* response: they sacrificed men *more* readily after implicit stereotype exposure compared to counter-stereotype exposure (F(1,363)= 4.42, p= 0.036, d= 0.11), as shown in Figure 4. No other simple effects reached significance (see Table 4). There was no further interaction with the term Study (F<1.28, p>0.25), indicating that the effects described above were similar in both studies.

In conclusion, analysing our data with this cumulative (IDA) approach confirmed our central hypothesis regarding sacrificing of men: compared to implicit counter-stereotype exposure, implicit stereotype exposure led distinctive feminists to sacrifice men more often. The hypothesis regarding the sacrificing of women was not supported.

Figure 4. Women's tendency to sacrifice men (top panel) and women (bottom panel) in the MCD task.



NB: Error bars represent 1 standard error. High and low feminist and women's identification are plotted at 1 standard deviation above and below the mean.

Table 4. *Simple effects in the MCD task.*

	Person to be sacrificed	Exposure condition					95% CI	
		Stereotype	Counter-stereotype	M_{diff}	Std. Error	*p*-value	Lower	Upper
Non-identifiers	Men	**1.76**	**2.23**	**-0.47***	**0.18**	**0.010**	-0.83	-0.11
	Women	2.15	2.15	-0.004	0.19	0.982	-0.37	0.36
Traditional identifiers	Men	1.90	1.96	-0.06	0.23	0.792	-0.51	0.39
	Women	1.89	2.04	-0.15	0.23	0.520	-0.61	0.31
Dual identifiers	Men	**2.04**	**2.37**	**-0.33**	**0.19**	**0.087**	-0.71	0.05
	Women	2.18	2.14	0.04	0.19	0.837	-0.34	0.42
Distinctive feminists	Men	**2.37**	**1.77**	**0.60***	**0.29**	**0.036**	0.04	1.16
	Women	2.12	2.04	0.085	0.29	0.767	-0.48	0.65

NB: High and low feminist and women's identification are plotted at ±1 standard deviation above and below the mean.

Discussion

This research shows that distinctive feminists resist implicit stereotypes by more readily sacrificing men in the Moral Choice Dilemma task. In general, and in line with previous findings (Cikara et al., 2010), men are less likely to be sacrificed when they are presented as high in social value. That is, men are *less* likely to be sacrificed after exposure to implicit gender stereotypes than after counter-stereotype exposure. Distinctive feminists, on the other hand, reverse this pattern, and are *more* likely to sacrifice men when they are presented as high in social value. That is, distinctive feminists are *more* likely to sacrifice men after implicit stereotype exposure than after counter-stereotype exposure. This reversal is indicative of motivated resistance to implicit gender stereotypes. The data presented in the current chapter extend the findings of Chapter 3, by showing that resistance can occur through outgroup focused responses. More specifically, the current study shows that distinctive feminists can resist implicit gender stereotypes by *downgrading* men.

Many previous studies have documented resistance to *explicit* stereotypes, for instance in the form of anger (Barreto et al., 2010), or improved performance in a counter-stereotypical performance domain (de Lemus et al., 2017). Implicit stereotypes, on the other hand, often lead to stereotype conformity (Kray et al., 2001). For instance, it has been shown that, compared to explicit stereotypes, implicit stereotypes lead women to describe them-

selves in more stereotypical terms (Barreto et al., 2009), as well as adopt more submissive bodily postures (de Lemus et al., 2012). Nevertheless, the current Chapter shows that there are circumstances under which women are able to resist implicit gender stereotypes.

Given these findings, it might seem that distinctive feminists "hate" men and are just waiting for a chance to sacrifice them. However, this is not what the data show: distinctive feminists and other groups of women show similar overall tendencies to sacrifice men. The crucial point is that the groups respond differently to implicit stereotype versus counter-stereotype exposure. Implicit stereotypes trigger resistance amongst distinctive feminists, while reinforcing the value of men for other women. Moreover, we suggest that the tendency to sacrifice men, observed here, arises as a result of the motivation to resist implicit gender stereotypes. Sacrificing men is not the underlying goal of the distinctive feminists, but rather a way of counteracting implicit gender stereotypes. What the distinctive feminists object to are not men as a group, but the social value implications of stereotypes that privilege men above women.

This study showed no evidence for resistance through in-group favouritism, that is, reduced tendencies to sacrifice women. The specific circumstances that lead to either in-group favouritism or out-group derogation require further research, but the MCD paradigm might play a role in this asymmetry. While expressing devaluation through sacrificing is relatively simple and congruent with the task, favouritism would be expressed through "not-sacrificing", which involves negations that can pose a challenge to implicit cognition (Gilbert, 1991).

One further question is whether, like the response of distinctive feminists, the overall trend of sacrificing men more readily after *counter*-stereotype exposure, should also be considered resistance. The crucial aspect of resistance is that it *counteracts* a certain problem, as is the case for the distinctive feminists. For the overall trend, however, it is less clear that this is the case. Counter-stereotypes associate men with low status roles, and if participants consider this problematic, then a resistance response would be aimed at *restoring* the social value of men. That is, they would value men *more* (or at least equally) after counter-stereotype compared to stereotype exposure. In fact, however, they valued men *less* after counter-stereotype exposure, suggesting that this response cannot be classified as resistance.

Conclusions. These findings show that distinctive feminists resist gen-

der stereotypes, even when they occur at the implicit level. Importantly, this study is the first to show that resistance to implicit gender stereotypes can occur through out-group derogation. More specifically, exposure to implicit stereotypes increases distinctive feminists' willingness to sacrifice men.

“Llegaré a dónde quieres
llegar antes que tú estés allí
-dijo el que iba detrás de él. Me sé de
memoria tus intenciones, quién eres y
de dónde eres y adónde vas. Llegaré
antes que tú llegues.”

--Juan Rulfo, El Llano en Llamas

5

Nobody expects the Spanish resistance: Resisting implicit stereotypes when they legitimise disadvantage

Note: This chapter is based on van Breen, J.A., de Lemus, S., Spears, R., & Kuppens, T. (2017). Nobody expects the Spanish resistance: Resisting implicit stereotypes when they legitimise disadvantage.

Abstract

In spite of their subtle nature, implicit stereotypes have profound effects on those who are their targets. In this study, we use Spanish-German intergroup relations to examine implicit social identity threat as a factor that can trigger *resistance* to implicit stereotypes. We argue that implicit social identity threat occurs when implicit stereotypes legitimise in-group disadvantage, and that resistance arises to cope with this experience. Spanish participants were exposed to implicit in-group stereotypes that legitimised in-group disadvantage related to the economic crisis. Results showed that, indeed, implicit stereotypes that legitimise disadvantage triggered resistance, in the form of implicit in-group bias: participants associated positive words more readily with the in-group than the outgroup (Study 5.1), and associated negative words *less* readily with the in-group than the out-group (Study 5.2). These results indicate that people assess the implications of the stereotypes to which they are exposed, even when these are presented at the implicit level. As such, these findings highlight the role of implicit social identity threat in resistance to implicit stereotypes.

Stereotypes of social groups play an important role in maintaining the intergroup status quo, as they can be used to legitimise intergroup differences. A recent example of this process can be seen in the context of the economic crisis in Europe, whereby stereotypes of those from countries like Spain and Greece as lazy and incompetent are used to explain their economic circumstances (e.g. see Bloom, 2015; Brooks, 2011; Friedman, 2011). Often, these arguments are not explicitly made (for instance due to social desirability concerns, or political correctness), but conveyed in more subtle or even implicit ways. Because such implicit stereotyping occurs outside of conscious awareness it is difficult to recognize and difficult to confront directly (Kray et al., 2001; Major et al., 2003). In this chapter, we are interested in the factors that nevertheless allow people to *resist* implicit stereotypes. Specifically, we suggest that resistance is most pronounced when implicit stereotypes threaten social identity.

In spite of their subtle nature, implicit stereotypes have a profound impact on those who are their target. For instance, Agerström and Rooth (2011) showed that implicit biases towards overweight people predict hiring discrimination. Compared to explicit stereotypes, implicit stereotypes generally increase stereotype-conformity (Kray et al., 2001), such as more stereotypical self-descriptions (Barreto et al., 2009), and can also lead to lower self-esteem (Major et al., 2003), anxiety (Barreto et al., 2010), and cognitive depletion (McConnell & Leibold, 2001). There is also evidence that implicit stereotypes affect behaviour: Black participants show poorer performance after having interacted with White partners who hold implicit anti-Black biases (Holoien & Shelton, 2012). Such findings suggest that the subtlety of implicit stereotypes belies the great effect they have on those who are exposed to them. In the current study, we are interested in how people respond to implicit stereotypes, and whether they are able to resist them. Specifically, we argue that resistance arises in response to implicit stereotypes that threaten social identity.

Identity threat. Amongst members of disadvantaged groups, exposure to implicit stereotypes can lead to *social identity threat*, that is, the realization that a social group to which one belongs is devalued (Steele et al., 2002; Tajfel & Turner, 1979). There are two main reasons why implicit stereotypes would be threatening to social identity. Firstly, stereotypes ascribe (often negative) traits to individuals based on their membership in certain social groups, and as a result stereotypes could be threatening to identity. However, they can

also provide a sense of uniqueness, or differentiation from out-groups (Oakes, Haslam, & Turner, 1994), even when they are negative (Mlicki & Ellemers, 1996). That is, stereotypes in themselves do not necessarily threaten identity, even when they are negative.

A second reason why stereotypes can be threatening to identity is because of the role they play in maintaining a disadvantageous status quo. Stereotypes can legitimise inequality because they invoke traits, which are inferred to be causal factors in producing a group's outcomes. Perceiving stereotypes as causal factors in explaining group disadvantage provides legitimacy because it suggests that status differences between groups result from "real" and essentialized differences in the traits these groups possess (Jost & Kay, 2005; Rudman & Glick, 2008; Tajfel, 1981). That is, when people are confronted with inter-group inequalities, they use stereotypical inferences to explain or rationalize the differences in status or power between groups (e.g. Eagly & Steffen, 1984; Hoffman & Hurst, 1990; Jost & Banaji, 1994; Ridgeway, 2001). Indeed, stereotypes that suggest that a group is responsible for their own disadvantage have been shown to be a very powerful way of legitimising disadvantage (Henry, Reyna, & Weiner, 2004; Reyna, Henry, Korfmacher, & Tucker, 2006; Weiner, 1995). This suggests that this "legitimising function" of stereotypes is more threatening to group identity than the negative content/valence of the stereotype alone (see also Spears, Greenwood, de Lemus, & Sweetman, 2010). Importantly, legitimising information need not be explicit to have its effects. Merely presenting traits and outcomes conjointly will lead people to infer that the traits are causal in creating the outcomes (Kressel & Uleman, 2015).

Thus, it is clear from previous research that people are sensitive to the legitimising implications of stereotypes, even when such information is presented at the implicit level.

Here, we examine responses to implicit stereotypes that legitimise disadvantage, in comparison to implicit stereotypes without legitimising implications. We are interested in whether the different identity implications of legitimising and non-legitimising implicit stereotypes affect the occurrence of resistance.

Resistance. As the work discussed above illustrates, implicit stereotypes seem to elicit stereotype-conformity, assimilation and acceptance. Explicit stereotypes, however, are more commonly resisted. Here we define "resistance" as a motivational process that leads to a reaction counteracting a

threat to social identity, with the function of reaffirming or restoring threatened social identity. As such, resistance is evident from responses *opposite* to those induced by the manipulation. For instance, when women are exposed to *negative* gender stereotypes, they may counteract this by activating *positive* in-group associations (de Lemus et al., 2017, see also Chapter 3). That is, the motivational basis of resistance is evident from its functionality in addressing and redressing specific components of the threat. Resistance does not imply automatic contrast to just any stimulus, but is targeted to counteract those stimuli that are threatening to social identity.

Resistance can take the form of expressions of anger (Barreto et al., 2010), support for collective action (van Zomeren et al., 2012), or improved performance in counter-stereotypical domains (Kray et al., 2001). Particularly relevant to the case of implicit stereotypes, however, is the fact that resistance can also occur through implicit strategies, as has been shown to occur for other motivational processes (Bargh et al., 2001; Glaser & Kihlstrom, 2005; Moskowitz & Li, 2011). Implicit resistance can take the form of activation of counter-stereotypical in-group associations. For instance, women who are exposed to stereotypical gender roles or sexist interactions implicitly associate their in-group with counter-stereotypical attributes (de Lemus et al., 2013; Ramos et al., 2015). Likewise, participants show implicit in-group bias, that is, they associate the in-group more readily with positive attributes after exposure to stereotypical role divisions (de Lemus et al., 2017). Thus, implicit resistance can take the form of implicit in-group bias, as well as the activation of counter-stereotypical traits.

In sum, in this chapter we examine responses to implicit stereotypes that legitimise in-group disadvantage. In Chapters 3 and 4, we have shown that some individuals are able to resist stereotypes even when they are presented at the implicit level. Specifically, women who are strongly identified with feminists, but not with women, resist implicit stereotypes through implicit in-group bias, out-group derogation, and persistence in counter-stereotypical performance domains. In the studies that make up this chapter, we aim to replicate these findings in the context of national identity. In addition, we *manipulate* the interpretation of stereotypes, to examine how the threat posed by implicit stereotypes affects resistance. We expect that resistance will occur specifically when implicit stereotypes are threatening to identity, that is, when stereotypes legitimise intergroup inequality.

The current studies. To test our predictions we chose an inter-group con-

text characterised by well-known national stereotypes, clear in-group disadvantage, and a possible link between these two, whereby in-group disadvantage could be legitimised through stereotypes. Specifically, we use the context of national identity in Spain. Generally speaking, national stereotypes in Europe follow the well-known North-South divide on competence vs. warmth (Fiske et al., 2002; Pennebaker, Rimé, & Blankenship, 1996; Voci, 2006), which sees people from the Northern European countries as hard-working but cold-hearted, and those from Southern Europe as friendly but lazy (Linssen & Hagendoorn, 1994; Pennebaker et al., 1996; Willis & Rodríguez-Bailón, 2008). Further, the economic crisis, starting in 2008, has had a particularly strong effect on some Southern European countries, such as Spain. Germany, as the most dominant power amongst the Northern European countries, is perceived to have played a particularly important role in enforcing far-reaching austerity in Spain. Thus, the Spanish-German intergroup context is characterized by well-known national stereotypes, and also considerable disadvantage for Spain, as a result of the economic crisis. Previous research shows that salient national identity in the context of the economic crisis leads to explicit resistance (e.g., collective actions) amongst Spanish but not German participants (Fritsche et al., 2017).

Crucially for the current study, rhetoric in politics and the media has attempted to legitimise this disadvantage with reference to stereotypes by suggesting, for instance, that the current economic situation is due to poor work ethic in Southern Europe (Bloom, 2015; Brooks, 2011; Friedman, 2011). Regardless of whether there is any validity to such simplistic explanations for macro-level phenomena, in the current study we are interested in how Spanish people respond when they are exposed to these ideas implicitly. By manipulating whether implicit stereotypes legitimise disadvantage or not, we are able to examine how different implications of stereotypes affect resistance.

Study 5.1

We examine the idea that resistance will occur when implicit in-group stereotypes pose a threat to social identity, that is, when they are used to legitimise in-group disadvantage. Resistance can take a number of different forms, and as such this study includes several different measures of resistance. Resistance can take the form of implicit in-group bias on an evaluative decision task. That is, participants can activate ingroup-favouring asso-

ciations that *counteract* those they are exposed to during the manipulation. Likewise, resistance to implicit stereotypes can take the form of persistence in counter-stereotypical performance domains (Nussbaum & Steele, 2007; Chapter 3). Previous studies have shown that explicit measures tend not to be affected by implicit manipulations such as the one used here (see Chapter 3), leading us to expect few effects of the manipulation on the explicit measures. Nevertheless, they are included for comparison purposes. We expect resistance to arise when implicit in-group stereotypes legitimise in-group disadvantage. Conversely, we expect that when there is no link between implicit in-group stereotypes and disadvantage, participants will show no evidence for resistance.

Method

Participants. Undergraduates from the University of Granada (N=163) completed the study. Those who did not have the Spanish nationality (N=17) were excluded from the sample. We further excluded those who failed to comply with instructions or who had high error rates (>20%) during the manipulation phase (N=14). This left a total of 132 participants (24 males; 18.25%). The average age was 20.56 years old, ranging from 18 to 45 years old.

We expected effects of a small size, and with this sample we are able to detect such small effect sizes (d≈0.1) at a power of 1-β=0.80 (Faul, Erdfelder, Lang, & Buchner, 2007). The stopping rule used during data collection was to continue collecting data until the sample was large enough to detect effects of the expected size.

Design. Participants were exposed to 4 different types of implicit associations (a 4 x1 design). Identification with the national in-group was included as a covariate.

Implicit manipulation. The implicit associations to which participants were exposed were manipulated by the repeated pairing of subliminal in-group and out-group primes ("Spanish" and "German") with negative or positive target words. In the *stereotype condition*, participants were exposed to negative in-group stereotypes and positive out-group stereotypes, such as "Spanish-lazy", and "German-efficient". The *disadvantage condition* implicitly associated the in-group with targets relating to the economic disadvantage, such as "Spanish-debt", while implicitly associating the out-group prime "German" with economic advantage such as "credit" and "growth". The *legitimising condition,* reflecting the legitimising function of stereotypes, combined

both of these associations: "Spanish" was associated with *both* economic disadvantage *and* low competence (i.e. "Spanish-lazy"; "Spanish-debt"); "German" was associated with both economic advantage and high competence ("German-efficient"; "German-wealth"). This condition legitimises the disadvantage the in-group faces by suggesting that the in-group is responsible for their own outcomes through their stereotypical traits (Henry et al., 2004; Reyna et al., 2006). The fourth condition was a control condition, in which Spanish and German primes were switched, such that "German" was associated with low competence and economic disadvantage, and "Spanish" was associated with high competence and economic advantage. Importantly, this control condition was as complex as the legitimising condition in terms of the number of targets seen and classifications made, allowing us to rule out the fact that any differences between conditions are due to the complexity of the legitimising condition. Note that in a 2x2 design (e.g. presence vs absence of in-group stereotypes and in-group disadvantage) the control condition would be a neutral condition in which both in-group stereotypes and in-group disadvantage were absent. However, here the control condition presents the in-group positively. Therefore, we used a 4x1 design.

The target stimuli were selected based on a pre-test, which is described in the supplementary materials. We selected 10 low competence traits (e.g. lazy, inefficient) rated as stereotypical for the in-group (Spanish), and 10 high competence traits (e.g. productive, ambitious) that rated as stereotypical for the out-group (Germans), 10 nouns reflecting economic crisis (e.g. debt, poverty), and 10 nouns reflecting economic advantage (e.g. credit, wealth). The targets in the different categories were of similar length and frequency in Spanish (confirmed using the database at http://www.bcbl.eu/databases/espal/index.php), as longer or less frequent words can slow responses (Hudson & Bergman, 1985; Sainz, 2016).

The manipulation consisted of 120 trials, in which the subliminal group prime ("Spanish" or "German") was presented for 42 ms, with a supraliminal forward and backward mask (a random letter string) presented for 100 ms. Following the masked prime, the target appeared; participants' task was to classify the target as being related to high or low competence, or as related to the crisis or not. The target remained on the screen until a response was given.

Dependent measures. Following the threat manipulation, the dependent measures and covariates were administered in the order shown below.

The dependent measures include implicit, indirect, and explicit measures.

Implicit measure: Implicit in-group bias. We include an evaluative decision task to examine the effect of implicit threat on implicit associations with the in- and out-group (de Lemus et al., 2017; Fazio et al., 1995). Participants respond to positive or negative target stimuli (supraliminal), preceded by a subliminal in-group or out-group prime. The task, consisting of 120 trials, uses the same subliminal prime ("Spanish" or "German") as in the threat manipulation. The supraliminal targets were positive or negative words without stereotypical connotations, taken from the standard IAT measure (such as 'love' or 'peace') translated to Spanish (following Rodríguez-Bailón, Ruiz, & Moya, 2009). Participants were asked to classify targets as positive or negative. The facilitation of Spanish-positive pairs compared to German-positive pairs in reaction times (RTs) indicates implicit in-group bias (de Lemus et al., 2016; Fazio et al., 1995).

A pre-test with 26 participants established that, in the absence of a manipulation, there is no evidence for in-group, or indeed out-group, bias (F<1.376, p=0.241). Therefore, we can be confident that any bias in the experimental conditions is due to the manipulation.

Indirect measure: Math task. We measured persistence and performance in a competence domain through a math task (see Chapter 3). The task consisted of 8 math problems in increasing order of difficulty. Participants were asked to choose the correct answer from 4 options. Participants could choose "skip this question" if they did not know the answer. The final item was unsolvable, that is, the correct answer was not amongst the options. Participants might resist implicit stereotype exposure by spending more time on the unsolvable item. Additionally, resistance might be evident from improved performance on the solvable items.

Explicit measures.

Hiring task. The hiring task asked participants to read the CVs of two candidates supposedly applying for the same job. One candidate for the position was Spanish (in-group), the other German (out-group). As an explicit measure of in-group bias, participants rated the candidates in terms of competence, warmth and suitability for the job vacancy on a 7-point Likert scale. They were also asked to choose which of the two candidates they would hire if they were to make the decision (forced-choice). Resistance to implicit threat exposure would be evident from an in-group bias in favour of the Spanish candidate. Pre-testing of the CVs showed that, in the absence of personal in-

formation about the candidates, the two CVs did not differ on any of the three indicators.

Mood. A mood scale was created from a combination of the dejection/agitation scale (Higgins, 2001), and the PANAS (Tellegen, Watson, & Clark, 1988), resulting in a 10-item scale asking about positive (N=4; α=0.74) and negative (N=6; α=0.79) mood. Participants indicated their response on 9-point scale.

Collective Action. Participants' willingness to engage in collective action was measured with an 8-item scale referring to both normative (e.g. protesting) and non-normative collective (e.g. arson). Participants rated the perceived appropriateness of each of action on a Likert scale from 1 (not at all appropriate) to 9 (very appropriate). The Cronbach's alpha reliability of this scale was α=0.61. We considered this insufficient, and therefore the results for this measure are presented in the supplementary materials.

Covariate: In-group identification. Finally, participants completed the Multidimensional Identification measure (Leach et al., 2008; α=0.94) using a 9-point Likert scale, as an indicator of their identification with their national in-group.

Procedure. The study was run in the weeks preceding the regional elections (Testing days: 24/02 – 13/03; Election day (Andalucía): 22/03 2015). Upon arrival to the lab, participants read the study information and provided informed consent. Participants were randomly assigned to one of the four implicit threat conditions and completed the manipulation followed by the other measures, in the order described above. Finally, after a funnelled debriefing, participants were thanked, and given the opportunity to ask questions.

Preliminary analyses. None of the participants spontaneously reported awareness of the subliminal primes, but when explicitly asked to guess, 7 participants correctly identified at least one of the primes. We examined whether this varied based on threat condition, but this was not the case (all p-values above p=0.69). Additionally, prime awareness did not affect reaction times (F<1, p=0.63). Thus, these participants were retained in the sample. A predetermined cut-off was used for the reaction time data (RTs). RTs above 1500 ms and below 300 ms were excluded from analyses (Ratcliff, 1993). However, because significant kurtosis remained (Kurtosis = 4.44, K-S test statistic= 0.14, p<0.001), a more stringent criterion was preferred: data points more than 3 standard deviations from the mean were excluded. Preliminary analysis confirmed the existence of a random Subject factor (Wald's Z=7.13, p<0.001), reflecting a multilevel structure where trials are nested within participants.

Therefore, the models described below include a random Subject factor.

Analytical strategy. As a first step, we fit a model using omnibus tests for the interactions. In decomposing any interactions found, the simple effect of central interest is how the threat manipulation may create different effects of the in-group primes *relative to the out-group primes*. Theoretically speaking, we consider this the most relevant comparison, as several of our measures concern in-group bias, that is, the comparison of the in-group *to an out-group*. To compare the four experimental conditions, we created dummy variables comparing each of the conditions to each of the others, and contrasts comparing the each condition to the other three.

Results

The measure of central interest in this study is the measure of implicit in-group bias. Therefore, we briefly discuss the explicit and indirect measures (which produced few relevant effects), before moving on to the implicit measure. For a more detailed discussion of the results on the explicit measures, please refer to the supplementary materials.

Indirect and explicit measures. Our hypotheses regarding the math task (measuring performance and persistence) were not supported: there was no effect of threat condition on either performance or persistence (Fs<1.77, ps>0.16). Likewise, the hiring task and the mood measure showed no evidence for resistance. In the hiring task, threat condition did not affect ratings of warmth, competence or suitability of the in- and out-group candidates (Fs<1.95, ps>0.12). Finally, threat condition did not affect either positive or negative mood (Fs<1, ps>0.54).

Implicit inter-group bias. We are interested in in-group bias in the context of inter-group relations, that is, we are interested in how the inter-group context affects attitudes towards the in-group relative to the out-group. Therefore, the simple effect of interest is the comparison between in-group primes and out-group primes.

Hypothesis test. Omnibus analysis showed a main effect of target valence ($F(1, 13005)=13.03$, $p<0.001$): positive targets elicited faster responses than negative targets. The hypothesized 3-way interaction between threat condition, target valence and the group prime also reached significance ($F(3, 13005)=2.92$, $p=0.033$, see Figure 5a). There was no further interaction with identification ($F<1$).

Breakdown of the interaction showed that when the target is positive,

the subliminal group prime interacts with the contrast reflecting the difference between the legitimising condition and the other three conditions (F(1,13024)=11.32, p=0.001). That is, people respond differently to the primes when they have been exposed to the legitimising condition compared to the other three conditions. Further breakdown showed that, in the legitimising condition, in-group primes facilitated responses to positive targets, relative to out-group primes (M_{diff}=12.07 ms, F(1,13023)=5.83, p=0.016, d=0.1). That is, the legitimising condition elicits implicit in-group bias. In the disadvantage condition responses to positive targets were marginally affected by the subliminal group prime: there was a tendency for participants to associate positive targets with the out-group more than the in-group, that is, evidence for *out-group bias* on positive targets (M_{diff}=8.45 ms, F(1,13004)=3.33, p=0.068, d=0.16). In the control and stereotype conditions responses to positive targets were not significantly affected by the type of prime that preceded them (F<1, p>0.50).

Responses to negative targets showed a different pattern. There was a significant interaction between exposure condition and the prime type (F(3,13009)=2.76, p=0.041). Further breakdown showed that, in the control condition, responses to negative targets were affected by the category of the prime, such that negative targets were responded to faster when preceded by an out-group prime than an in-group prime (M_{diff}=-12.21 ms, F(1,13005)=7.51, p=0.006, d=0.24). Other simple effects did not reach significance (see Table 5a).

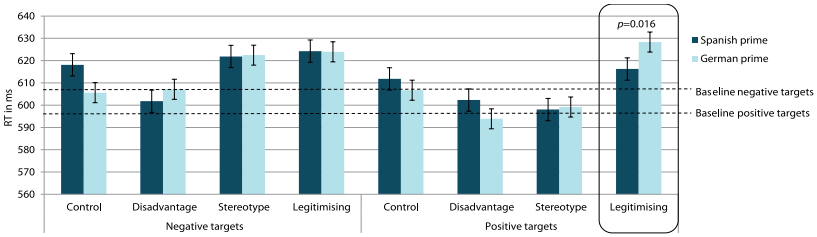
In sum, there were three significant simple effects. The simple effects in the disadvantage and control conditions show that participants learn the associations they are exposed to in the manipulation phase. In the control condition, participants see negative out-group associations, and subsequently out-group primes facilitate responses to negative targets. In the disadvantage condition, participants see positive out-group associations, and subsequently out-group primes facilitate responses to positive targets. However, the responses to the legitimising condition constitute a *reversal* of the manipulation: participants were exposed to negative in-group associations, but in-group primes subsequently facilitate *positive* targets. There were few effects on the explicit measures.

Table 5a. *Simple effects in the evaluative decision task*

Target valence	Threat condition	RT (per prime)					95% CI	
		Spanish	German	M_{diff}	Std. Error	*p*-value	Lower	Upper
Negative	**Control***	**618.12**	**605.91**	**12.21**	**4.46**	**.006**	**3.74**	**21.21**
	Stereotype	622.56	623.05	-.49	4.27	.856	-8.97	7.77
	Disadvantage	601.54	607.03	-5.50	4.61	.232	-14.37	3.69
	Legitimising	625.04	624.12	.92	5.08	.909	-9.64	10.27
Positive	Control	611.80	606.73	5.08	4.41	.249	-3.56	13.71
	Stereotype	598.05	599.18	-1.13	4.21	.789	-9.37	7.12
	Disadvantage*	**602.32**	**593.88**	**8.45**	**4.63**	**.068**	**-.63**	**17.52**
	Legitimising*	**616.25**	**628.32**	**-12.08**	**5.00**	**.016**	**-21.87**	**-2.28**

Note: Simple effects marked with an asterisk are described in the text.

Figure 5a. Reaction times in the evaluative decision task for Study 5.1.



NB: Error bars represent 1 standard error. Baseline reaction times are derived from a pilot study.

Discussion

The central question of this study is: when do implicit stereotypes trigger resistance? We argue that implicit social identity threat occurs when implicit stereotypes *legitimise* in-group disadvantage, and that resistance arises to cope with this experience. In line with this reasoning, we observed resistance (in the form of implicit in-group bias) following exposure to the legitimising condition. Resistance was evident from a reversal of the associations the participants saw during the manipulation: after seeing *negative* implicit associations with the in-group (e.g., Spanish-debt, Spanish-lazy), in-group primes facilitated the categorization of *positive* targets, that is, participants showed implicit in-group bias. These effects did not appear in the other conditions. Taken together, findings from this study indicate that resistance occurs in response to the legitimising function of stereotypes. Importantly, participants are able to differentiate the different functions of stereotypes even when information is presented at the implicit level.

We argue that when in-group stereotypes and in-group disadvantage are presented together, they are perceived to be linked, such that stereotypes suggest the in-group is responsible for the disadvantage they face. Those who have negative traits get negative outcomes, and those who have positive traits get positive outcomes (see also Reyna et al., 2006). This reasoning suggests that participants perceive a (causal) link between implicit in-group stereotypes and in-group disadvantage. However, in this study we did not test directly whether participants in fact perceive such a link. It could be that participants simply interpret the legitimising condition as a "double threat". Such an explanation could not be excluded in this study. Study 5.2 examines this issue.

Study 5.2

Study 5.1 showed that resistance occurred when participants were exposed to both implicit stereotypes and negative outcomes for the in-group (i.e., in the legitimising condition). Above we have argued that this effect in the legitimising condition is due to implicit identity threat arising from a perceived link between stereotypes and in-group disadvantage. However, Study 5.1 did not directly address whether participants did indeed perceive such link. Reyna et al. (2009) have argued that stereotypes that imply that a group is responsible for their negative outcomes are one of the most powerful tools for legitimising disadvantage. If this is the case, then the legitimising condition should affect responses to concepts related to legitimacy, responsibility and blame.

To examine this idea, Study 5.2 includes implicit and explicit measures of perceived legitimacy and responsibility. We expect to find that the legitimising condition affects implicit processing of these concepts. This will be examined using a lexical decision task (LDT). The legitimising condition can affect the processing of the concept of responsibility in at least two different ways. Firstly, when a concept is activated, this could lead to faster responses to that concept (Kawakami et al., 2000; McNamara & Healy, 1988). On the other hand, in the legitimising condition the concept of responsibility acquires a threat component because it could imply that the in-group is responsible for its own disadvantage. Such threat is known to slow down reaction times (Algom, Chajut, & Lev, 2004; Spears, Gordijn, Dijksterhuis, & Stapel, 2004; Wentura, Rothermund, & Bak, 2000). If this is the case, we might expect *slower* responses to responsibility (compared to neutral) targets in the legitimising condition.

In sum, we expect that the legitimising condition will lead to differences in the processing of responsibility targets compared to neutral targets, differences that are not predicted for the other conditions. Such findings would constitute evidence that the legitimising condition is perceived as linking stereotypes and disadvantage through the suggestion that the in-group is responsible for the disadvantage they face. Examining processing of the concept of responsibility will allow us to say *what it is* that makes the legitimising condition threatening (namely, the implied responsibility). For the explicit measure of responsibility we expect no effect of the manipulation, as we consider the manipulation to be too subtle. Additionally, we expect to replicate the resistance finding from Study 5.1, which showed that the legitimising condition leads to implicit in-group bias.

Method

Participants. Undergraduates from the University of Granada (N=160) participated in this study. Those who did not have the Spanish nationality (N=9) were excluded from the sample. Three participants who had high error rates (>20%) during the manipulation phase were also excluded. This left a total of 148 participants (34 males; 24.1%) in the final sample. The average age was 21.42 years old, ranging from 18 to 39 years old.

We expected effects of a small size, and with this sample we are able to detect such small effect sizes ($d \approx 0.1$) at a power of $1-\beta=0.80$ (Faul, Erdfelder, Lang, & Buchner, 2007). The stopping rule used during data collection was to continue collecting data until the sample was large enough to detect effects of the expected size.

Design. Study 5.2 used the same design as Study 5.1, assigning participants to one of four different threat conditions: exposure to in-group stereotypes, exposure to in-group disadvantage, exposure to both stereotypes and disadvantage, and a counter-stereotype control condition. Identification with the national in-group (Leach et al., 2008, $\alpha=0.948$) was included as a covariate.

Dependent measures. Like Study 5.1, this study included the evaluative decision task, as well as measures of positive mood ($\alpha=0.76$), negative mood ($\alpha=0.77$), and collective action ($\alpha=0.64$). The hiring task was dropped from this study. Measures that are new, or adapted based on Study 5.1, are described in detail below.

Responsibility processing. To examine whether the legitimising condition triggers responsibility associations we included a LDT, containing 96 trials, in which participants must decide whether a target stimulus is an existing word or not. The target categories were non-words (48 trials), neutral targets (24 trials) and responsibility targets (24 trials). Neutral targets included words such as "regrettable" and "irregular", while responsibility targets included words such as "guilty", "responsible", and "accused". The non-words were created by scrambling the letters of the word targets. All words were selected, based on pre-testing, to be of similar valence (slightly negative), and comparable length and frequency. If the legitimising condition affects processing of responsibility, it should affect responses to responsibility targets relative to neutral targets.

Explicit responsibility and legitimacy. We also included an explicit measure examining to what extent participants' perceived the in-group to be responsible for their own disadvantage, and how legitimate they found the circumstances. Those who were exposed to the legitimising condition may resist

the implication of in-group responsibility by denying legitimacy and responsibility. The scale consisted of items such as "For me it is clear that Spain is not responsible for the economic crisis" (in-group responsibility; 6 items; α=0.76), and "I think the effect of the economic crisis on Spain are unfair" (legitimacy, 3 items; α=0.62). Participants rated their agreement with each item on a scale of 1 to 9; higher scores reflect *low* perceptions of legitimacy and responsibility.

Math task. We adapted the instructions for the math task, to create more overlap between the associations that are primed implicitly during the manipulation, and the framing of the math task (Payne et al., 2008). More specifically, in Study 5.1 the math task was described simply as a measure of competence, while in Study 5.2 the math task was described as a measure of *financial* competence, creating greater fit with the crisis context.

Collective action. As the alpha reliability of this measure was insufficient in Study 5.1, we adapted the phrasing of some of the items. However, the alpha reliability of the measure remained low (α=0.64), and therefore, as for Study 5.1, results are discussed in the supplementary materials.

Procedure. This study was run in the weeks preceding the national elections (Testing days: 23/11 – 03/12; Election day: 20/12 2015). Upon arrival to the lab, participants read the study information and provided informed consent. Participants were randomly assigned to one of the four threat conditions and completed the manipulation followed by the dependent measures: the evaluative decision task and the lexical decision task were completed first in a counterbalanced order, followed by the math task and the mood measure. Participants then indicated their nationality, and identification with their national group, before completing the measures that explicitly referred to their national identity: the collective action measure and a short questionnaire about legitimacy and responsibility. Finally, participants completed a funnelled debriefing. None of the participants guessed the nature of the experiment. At the end of the study, participants were given the opportunity to ask questions and were thanked for their participation.

Preliminary analyses. None of the participants spontaneously reported awareness of the subliminal primes, but 3 participants correctly identified one of the primes. As in Study 5.1, these participants were retained in the sample. For the RTs we used the same cut-off criterion as in Study 5.1 (i.e., 3 standard-deviations above or below the mean). This meant that 6.01% of data points were excluded. As before, there was a random Subject factor (Wald's Z =8.41, p<0.001), which is included in the models described below.

Results

Indirect and explicit measures. As in Study 5.1, the indirect and explicit measures produced few relevant effects. Therefore, they are discussed only briefly here, and more extensively in the supplementary materials. Persistence and performance on the math task were not affected by threat condition (Fs<1.15, ps>0.33). Likewise, positive and negative mood were not affected by threat condition (Fs<1.24, ps>0.29). Finally, perceptions of *explicit* legitimacy and in-group responsibility showed no effects of threat condition (Fs<1).

Implicit inter-group bias.

Hypothesis test. The omnibus analysis showed a main effect of target valence ($F(1, 18314)=62.27$, $p<0.001$): positive targets elicited faster responses than negative targets. There was evidence for the predicted 3-way interaction between threat condition, group prime and target valence ($F(3,18314)=2.86$, $p=0.036$).

Breakdown of the 3-way interaction showed that, unlike in Study 5.1, responses to positive targets were not affected by the interaction between threat conditions and group prime (F<1).

When looking at negative targets, the group prime interacts with exposure condition ($F(3,18314)=3.13$, $p=0.024$). Further breakdown, using dummy variables, showed that the primes affected responses to negative targets in a different way in the legitimising condition compared to the other three conditions ($F(1,18314)=8.39$, $p=0.004$). Specifically, in the legitimising condition, in-group primes (relative to out-group primes) delayed responses to negative targets (M_{diff}=31.86 ms, $F(1,18305)=10.92$, $p=0.001$, $d=0.27$). That is, there was evidence for in-group bias (on negative targets) in the legitimising condition. This effect is presented in Figure 5b. No other simple effects reached significance (Fs<2.39, ps>0.121, see Table 5b).

Responsibility processing.

Processing of the concept of responsibility was measured with a LDT containing responsibility targets, neutral fillers, and non-words.

Hypothesis test. There was a main effect of target category ($F(1,6862)=7.46$, $p=0.006$), such that participants responded more slowly to responsibility targets than to neutral targets. Additionally, there was a marginal omnibus interaction between threat condition and target category ($F(3,6862)=2.20$, $p=0.086$). When focusing specifically on the contrast between the legitimising condition and the other three conditions, this interaction reached signif-

icance (F(1,6862)=5.127, p=0.024). Specifically, in the legitimising condition, responses to responsibility targets were significantly *slower* than responses to neutral targets (M_{diff}=28.82 ms, F(1,6862)=11.19, p=0.001, d=0.28, other p-values above p=0.14). Thus, although the omnibus interaction was only marginally significant, the contrast between the legitimising condition and the other three conditions showed that participants in the legitimising condition are slower to respond to the responsibility targets than to the neutral targets. This finding is in line with the hypothesis that the legitimising condition creates a threatening, implicit link between stereotypes and disadvantage.

Exploratory analyses.

Results presented above have shown that the legitimising condition leads to implicit in-group bias, and to slower categorization of responsibility targets. We now explore how these two responses relate to one another. As expected, there was evidence that the relation between the two responses depended on threat condition (F(3,17692)=3.97, p=0.009): in the legitimising condition, the degree of in-group bias and the delay of responsibility targets were significantly negatively related (β= -0.59, F(1,17692)= 15.06, p=0.001, d=0.31), and this negative relationship was stronger than in the other conditions (F(1,17692)= 16.40, p=0.001, d=0.33). Thus, the legitimising condition gives rise to two responses that are inversely related: once one response has taken place, the other is less likely to occur.

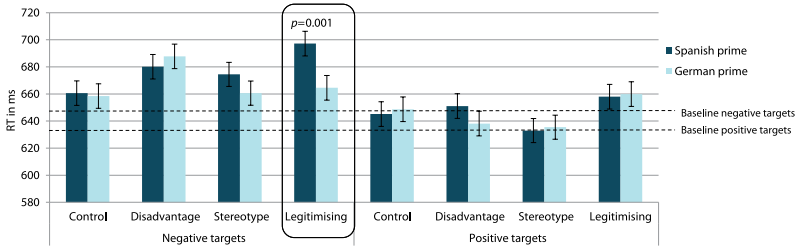
So what determines which response option is preferred? There was some evidence that the strongest effects were present on whichever measure participants were presented with first. Although these order effects did not reach statistical significance (Fs<1.97, ps>0.11), trends showed that those who were presented with the in-group bias measure first showed a greater degree of in-group bias (and a smaller delay in responsibility categorization) than those who saw the responsibility measure first, and vice versa (see Figure 5c).

Table 5b. *Simple effects in the evaluative decision task.*

Target valence	Threat condition	RT (per prime)					95% CI	
		Spanish	German	M_{diff}	Std. Error	*p*-value	Lower	Upper
Negative	Control	661.01	658.81	2.198	9.64	0.820	-16.70	21.10
	Stereotype	674.98	660.45	14.52	9.40	0.122	-3.90	32.95
	Disadvantage	681.09	688.80	-7.71	9.64	0.424	-26.61	11.19
	Legitimising*	**696.48**	**664.63**	**31.86**	**9.64**	**0.001**	**12.96**	**50.76**
Positive	Control	645.57	649.10	-3.53	9.64	0.714	-22.43	15.37
	Stereotype	633.23	635.25	-2.01	9.40	0.830	-20.43	16.41
	Disadvantage	651.97	639.08	12.89	9.64	0.181	-6.01	31.79
	Legitimising	657.81	660.38	-2.56	9.64	0.790	-21.47	16.33

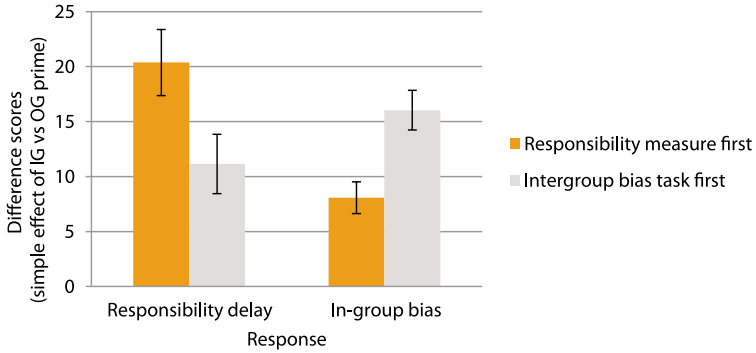
Note: Simple effects with an asterisk are described in the text.

Figure 5b. Reaction times in the Evaluative decision task in Study 5.2.



NB: Error bars represent 1 standard error. Baseline reaction times are derived from the pilot study.

Figure 5c: The effect of presentation order on the implicit measures.



Discussion

Here we replicated the finding, from Study 5.1, that resistance occurs when stereotypes legitimise in-group disadvantage. However, the resistance response took a slightly different form than in Study 5.1. In the first study, exposure to the legitimising condition was resisted by *more readily* associating *positive* targets with the in-group than the out-group. In this study, exposure to the legitimising condition was resisted by *less readily* associating *negative* targets with the in-group than the out-group. In spite of this difference, as in Study 5.1, this response constitutes a reversal of the associations participants saw during the manipulation: after seeing negative targets consistently associated with the in-group rather than the out-group, participants showed the opposite response: negative targets were *less* likely to be associated with the in-group compared to the out-group, that is, participants showed implicit in-group bias. In the other conditions, this resistance did not occur. Thus, resistance occurs in response to the legitimising function of stereotypes.

In these studies, disadvantage was legitimised through stereotypes that suggest that the group is responsible for their own social position, due to their stereotypical characteristics (Henry et al., 2004; Reyna et al., 2006). Indeed, results confirmed that participants perceived this implied responsibility: the legitimising condition influenced the processing of responsibility stimuli. After exposure to the legitimising condition, participants responded more slowly to responsibility targets compared to neutral targets. In the legitimising condition, the concept of responsibility acquires a threat component, which then

appears to interfere with the lexical categorization of the word, in line with research showing that threatening targets require more detailed processing than neutral targets (Algom et al., 2004; Wentura et al., 2000). This finding supports our hypothesis that the legitimising condition affects the processing of the concept of responsibility. More broadly, this finding provides evidence that participants interpret the joint presentation of implicit in-group stereotypes and in-group disadvantage as having responsibility implications (Reyna et al., 2006).

An interesting remaining question is whether the delayed responses to responsibility targets should be seen as a form of resistance. We have defined resistance as a motivated response that *counteracts* the threat induced by the manipulation. Indeed, we might argue that, if the legitimising condition suggests that the in-group is responsible for the disadvantage they face, then participants may become motivated to "deny" this, which might be reflected in inhibited (i.e. slower) responses to responsibility targets. Previous studies have supported the notion that slower word categorization can function as a form of resistance. Spears et al. (2004) showed that when an intergroup context is primed, people were slower to categorize words that reflect out-group attributes, as a way of distancing themselves from these traits. In our study too, we might interpret the delayed responses to responsibility targets as a motivated resistance response aimed at counteracting the threat. Although the responsibility measure was not designed to assess this issue directly, there is some exploratory evidence that this finding might indeed represent a resistance effect. If the delay in responsibility categorization was "just" an effect of threat, we would have expected a positive relationship between delay in responsibility categorization and in-group bias: the more acute the threat, the greater the need for resistance. Instead, the fact that the two measures were inversely related, suggests that these two responses serve the same purpose: once one response has taken place, the other is no longer needed (Heine, Proulx, & Vohs, 2006; see also Tesser, 2000 for a similar effect in the context of self-regulation). Though exploratory, these findings suggest that the delay in responsibility categorization, like implicit in-group bias, could be a product of the motivation to resist.

In sum, Study 5.2 replicated the finding from Study 5.1 that, when implicit stereotypes are used to legitimise in-group disadvantage this produced implicit resistance, although the resistance effect took a slightly different form than in Study 5.1. Moreover, findings regarding the processing of responsibil-

ity stimuli supported our hypothesis that the legitimising condition legitimises disadvantage through the suggestion that the in-group is responsible for the disadvantage they face.

General Discussion

Results from two studies show evidence for implicit resistance to implicit identity threat in the context of national identity in Spain, and as such provide a conceptual replication of findings of Chapters 3 and 4. More specifically, the studies that make up this chapter show that when implicit stereotypes legitimise in-group disadvantage, this threatens social identity, and participants address this through implicit in-group bias. Separate exposure to implicit stereotypes or implicit in-group disadvantage did not produce such effects.

Many studies have shown that repeated exposure to certain associations leads to subsequent facilitation in responding to those associations (Kawakami et al., 2000; McNamara & Healy, 1988). However, in the studies described here, exposure to the legitimising condition leads participants to show a *reversal* of the associations they were exposed to. The legitimising condition presented participants with associations that reflected negatively on the in-group compared to the out-group. In Study 5.1, participants reversed this by responding faster to in-group positive pairs than to out-group positive pairs. In Study 2, exposure to the legitimising condition led participants to respond more *slowly* to in-group negative pairs than out-group negative pairs. Thus, in both studies exposure to the legitimising condition leads participants to respond in ways that *contravene* the associations they have been exposed to in the manipulation, indicating resistance. There was no evidence for resistance on explicit measures.

The legitimising function of stereotypes. These studies illustrate that resistance to implicit stereotypes is triggered by the role they play in legitimising in-group disadvantage. The fact that resistance is specific to the legitimising condition illustrates several points. Firstly, these findings suggest that resistance is aimed at counteracting implicit social identity threat. When stereotypes are used in a descriptive way only, people are likely to have a certain level of tolerance for stereotypes, even if negative, because they say something about "who we are" (Gómez, Seyle, Huici, & Swann, 2009; Mlicki & Ellemers, 1996; Swann, 2011). Indeed, here we observed that exposure to implicit stereotypes alone does not produce resistance. Likewise, the disadvantage condition does not produce resistance. This condition implicitly

exposes participants to in-group disadvantage (and out-group advantage) without suggesting any cause or reason for this situation. As such, this condition perhaps threatens the outcomes of the group more than their identity. The legitimising condition is arguably most threatening to group identity. In this condition, rather than being confronted with stereotypes alone, participants are exposed to implicit stereotypes that legitimise a larger social system in which the in-group is disadvantaged. It is in this condition that resistance arises as a means of counteracting that threat. Thus, it seems that it is implicit social identity threat, rather than negative in-group associations per se, that triggers resistance.

Secondly, with regards to *implicit* stereotypes, the fact that resistance is specific to the legitimising condition shows that participants are able to assess the implications of the associations they are exposed to, even when these associations are presented *at the implicit level*. Put differently, people not only pick up on, but *interpret* implicit associations in the light of knowledge about the broader social context of which they are a part. This finding supports the idea that resistance to implicit stereotypes reflects a motivated mechanism aimed at protecting the in-group.

In the current research, the legitimising function of stereotypes was part of the manipulation, but it is likely that in natural settings not all individuals are equally aware of the role played by stereotypes in maintaining the status quo. For instance, activists who aim to change social inequality, and other highly politicized groups, may be more aware of the legitimising function of stereotypes than the general public (e.g. see Chapter 2). As a result, such politicized groups may be more able to resist implicit identity threat.

These findings of this chapter also provide insight into situations in which resistance does *not* occur. For instance, considering the fact that implied legitimacy of *in-group disadvantage* is an important factor in the occurrence of resistance, this indicates that advantaged or high-status groups may be less likely to show resistance to implicit stereotypes. For disadvantaged groups, disadvantage is a part of the status quo to a greater extent than for advantaged groups, therefore, disadvantaged groups might have more strategies at their disposal to resist implicit stereotypes than do advantaged groups. Differences between advantaged and disadvantaged groups in their responses to implicit stereotypes are a fruitful topic for future research.

Implicit resistance. The resistance that was observed in these studies occurred at the same level as the threat: exposure to *implicit* stereotypes elic-

its *implicit* resistance. There are several possible explanations for why resistance occurred on implicit rather than explicit measures. Firstly, the effects of the manipulation may have worn off by the time the indirect and explicit measures were completed, as they were administered towards the end of the studies. This can be compounded by a sense of goal completion after resisting on the first measure, leading to goal inhibition (Rothermund, 2003). Alternatively, it could be that implicit stereotypes are simply too subtle to elicit explicit resistance. The fact that implicit stereotypes cannot be consciously evaluated or attributed to any source (Major et al., 2003) might make explicit resistance strategies such as anger, protesting and explicit in-group bias less viable. That is, in dealing with an implicit threat, implicit strategies are perhaps more accessible. Together, these factors may explain why resistance to implicit social identity threat is more likely to occur on implicit compared to explicit measures.

The studies reported here further illustrate that implicit resistance can take different forms. In the first study, participants resisted the legitimising condition by more readily activating ingroup-positive associations, while in the second study, participants resisted by *less* readily activating ingroup-*negative* associations. One possible explanation for this difference is that Study 5.2 was more threatening overall because it was run just before *national* elections. As a result, national identity and the Spanish-German intergroup context may have been more salient when Study 5.2 was run compared to Study 5.1, which was run before *regional* elections. Therefore, it is possible that the difference between national and regional elections affected how threatening participants perceived the manipulation to be, and the resistance responses they subsequently showed. Nevertheless, we argue that these two responses serve the same purpose: to affirm or maintain positive social identity (Hepper, Gramzow, & Sedikides, 2010; Weber, 1994). That is, across studies, the associations participants make reflect a motivated mechanism that counter-acts the implicit threat arising from the legitimising condition, and as such both responses can be considered resistance responses.

Conclusion. The studies that make up this chapter replicate the findings of Chapters 3 and 4 in the context of national identity in Spain. Additionally, these studies demonstrate that implicit resistance, in the form of implicit in-group bias, is triggered when implicit stereotypes threaten social identity by legitimising in-group disadvantage. In line with this reasoning, neither in-group stereotypes alone, nor in-group disadvantage alone, was sufficient

to produce implicit resistance. Only when implicit stereotypes legitimise in-group disadvantage, did resistance arise. We believe these findings allow us to better understand resilience amongst members of disadvantaged groups by showing that stereotypes can be resisted, even when they occur implicitly.

Nobody expects the Spanish resistance

5

6

A cautionary note: A boundary condition for resistance to implicit identity threat

Abstract

This chapter attempts to replicate findings of Chapter 5 in the context of regional identity in the Netherlands. We recruited students who are originally from the province of Groningen, and focused on the intergroup comparison between the inhabitants of the province of Groningen, compared to the inhabitants of the metropolitan area ("de Randstad"). We exposed participants to implicit stereotypes that legitimise in-group disadvantage, or a control condition. Results showed no evidence for implicit resistance to implicit identity threat. Instead, participants went along with the manipulation. However, once the threat to the in-group was made explicit, high identifiers indicated more support for radical collective action. This suggests they were motivated to resist, but were unable to do so at the implicit level. In considering reasons for this, we suggest that participants were perhaps not familiar enough with the threatening context for implicit resistance to arise. That is, chronic exposure to a threat may be needed for group members to build up resilience at the implicit level. The data presented in this chapter, then, suggest that there are circumstances in which resistance to implicit stereotypes does *not* occur. Such null findings are relevant in providing an indication of the boundary conditions of the effect being studied, and as such contribute to a fuller understanding of resistance to implicit identity threat.

Chapter 5 demonstrated that resistance to implicit stereotypes is triggered by their legitimising function. The "legitimising function" of implicit stereotypes is potentially more threatening to group identity than the negative content or valence of the stereotype alone (see also Spears, Greenwood, de Lemus, & Sweetman, 2010), because it suggests that the in-group is responsible for the disadvantage they face (Reyna et al., 2006). Thus, it is clear from previous research that people are sensitive to the implications of legitimising information, even when it is presented at the implicit level (see Chapter 5), and that this, in turn, affects the experience of implicit social identity threat. In the current study, we turn to the context of regional identity in the Netherlands to replicate this finding.

This study was conducted amongst students who are originally from the province of Groningen, and focused on the intergroup comparison between the inhabitants of the province of Groningen, compared to the inhabitants of the metropolitan area ("de Randstad"). We use a simplified version of the design used in Chapter 5, exposing participants to implicit stereotypes that legitimise in-group disadvantage, or a non-threatening control condition. Stereotypes of people from the province of Groningen versus those from the Randstad are similar to urban-rural stereotypes in other contexts. People from remote rural backgrounds (Groningen) are stereotyped as old-fashioned, backwards, traditional, introverted, and uneducated, while those from urban (Randstad) backgrounds are seen as modern, flexible, outgoing, and arrogant (e.g. Thompson, 2013). In addition to these stereotypes, the province of Groningen faces considerable economic disadvantage compared to the rest of the Netherlands. Historically the province had a lot of heavy industry, and a large agricultural sector, but these sectors are in decline, and there are now few job opportunities in the province. In addition to this, in recent years the province has experienced earthquakes induced by the exploitation of a large natural gas field, causing damage to properties and house prices to fall. In sum, the province currently faces considerable disadvantage compared to the rest of the country.

We believe this context of regional identity provides a suitable context to attempt to replicate the findings of Chapter 5, because, like in Chapter 5, stereotypes of the in-group are not necessarily linked to in-group disadvantage (or vice versa). That is, implicit stereotypes of the group do not automatically bring to mind the disadvantage the group faces, and as such this link can be manipulated in such a way that implicit stereotypes are more or less threat-

ening to identity. Specifically, we create implicit identity threat by exposing participants to implicit associations that legitimise the disadvantage faced by people from Groningen with reference to stereotypes of group members. More specifically, in the legitimising condition stereotypes of the in-group as backwards and uneducated are used to justify the disadvantage faced by in-group members. Implicit exposure to these "legitimising stereotypes" is expected to trigger resistance in the form of implicit in-group bias.

Method

Participants. Sixty-eight undergraduates from the University of Groningen completed the study. Those who reported seeing the primes were excluded from the sample (N=2). Participants who had high error rates during the manipulation phase (N=3), and those who did not comply with instructions (N=1) were also excluded. This left a total of 62 participants divided over 2 conditions (18 males; 29%) in the final sample. The average age was 20.54 years old, ranging from 18 to 35 years old.

The stopping rule used during data collection was a practical one: the number of participants that could be recruited within a 2-week period. With this sample we are able to detect small-to-medium effect sizes ($d \approx 0.16$) at a power of $1-\beta=0.8$ (Faul, Erdfelder, Lang, & Buchner, 2007).

Design. During the manipulation phase participants were exposed to implicit associations that were either threatening to identity, or non-threatening. Identification with the in-group (Groningen) was included as a covariate. After exposure to in-group associations according to condition, participants completed an evaluative decision task as a measure of implicit in-group bias. In the evaluative decision task, participants were presented with in-group and out-group primes followed by positive and negative targets. Thus, within-participant factors were prime type (in-group vs. outgroup) and target type (positive, negative), creating 4 different trial types.

Threat manipulation. Implicit social identity threat was manipulated in a priming paradigm, in such a way that neither the prime nor the target were threatening in isolation, but rather the repeated combination of certain primes with certain target words created social identity threat. Participants were exposed to either a legitimising condition, or a control condition. The legitimising condition was designed to create implicit identity threat: participants were exposed to implicit associations that legitimise in-group disadvantage with reference to in-group stereotypes, in the same way as in Chapter

5. The subliminal in-group prime "Groningen" was paired with negative in-group stereotypes (e.g. Groningen-backward) and in-group disadvantage (e.g. Groningen-poor). The subliminal out-group prime "Randstad" was paired with positive stereotypes and out-group advantage (e.g. Randstad-modern; Randstad-wealthy). That is, the legitimising condition implicitly exposed participants to negative in-group stereotypes and in-group disadvantage, while the out-group was associated with positive group stereotypes and *advantage*. In the non-threatening control condition, we exposed participants to the reverse of the associations described above. Importantly, this control condition was as complex as the threatening condition in terms of the number of targets seen and classifications made, except that the prime associated with each target was reversed.

The threat manipulation task consisted of 120 trials. Each trial consisted of a prime word, "Groningen" or "Randstad". The prime was presented sub-optimally for 50 ms, with a supraliminal forward and backward mask (a random letter string) presented for 100 ms. Following the masked prime, the target appeared, remaining on screen until the response is given. Participants' task was to classify the word as being positive or negative. In the legitimising condition, social identity threat was created by pairing Groningen primes with negative targets and Randstad primes with positive targets in 95% of trials, while the control condition associated Groningen primes with positive words, and Randstad primes with negative words in 95% of trials.

Stereotype targets consisted of 10 negative trait words, which a pilot study confirmed as being stereotypically associated with people from Groningen (e.g., backward, dumb, old-fashioned), and 10 positive traits that are stereotypically associated with people from the Randstad area (e.g., modern, innovative, creative). The targets relating to in-group disadvantage were 10 positive and 10 negative words related to economic topics, such as "unemployment", and "decline" and positive words included "growth" and "wealth".

Dependent measures. Following the threat manipulation, the dependent measures were administered in the order presented below.

Implicit measure.

Evaluative decision task. The evaluative decision task (Fazio et al., 1995) measured implicit in-group bias. This task, consisting of 120 trials, used the same subliminal prime ("Groningen" or "Randstad") as the threat manipulation. The prime was followed by a supraliminal target: positive or negative words such as 'love' or 'peace'. Participants were asked to classify targets

as positive (N=10) or negative (N=10). In this task, the facilitation of Groningen-positive pairs following identity threat would be indicative of an implicit evaluative in-group bias (de Lemus et al., 2016; Fazio et al., 1995).

Explicit measures.

Math task. The math task was designed to measure persistence and performance following implicit identity threat, and consisted of 8 math problems in increasing order of difficulty. Participants were asked to choose the correct answer from 4 options. The final item was unsolvable, that is, the correct answer was not amongst the options. In addition to the four choice options, participants could choose "skip this question" if they did not know the answer. Resistance might be evident from the observation that, after exposure to implicit identity threat, participants spend more time on the task, specifically on the unsolvable item. Alternatively, resistance might be evident from improved performance following implicit identity threat.

Mood measure. A mood scale was created from a combination of the dejection/agitation scale (Higgins, 2001), and the PANAS (Tellegen, Watson, & Clark, 1988), resulting in a 10-item scale asking about positive (N=4; α=0.83) and negative (N=6; α=0.84) mood. Participants indicated the extent to which they experienced each of the 10 emotions on a 9-point scale ranging from "not at all" to "very much".

In-group identification. Before completing the measures that referred directly to the intergroup context (such as the collective action measure), participants reported their identification with people from Groningen by completing the Multidimensional Identification measure (Leach et al., 2008; α=0.95) using a 9-point Likert scale.

Legitimacy & Responsibility. Following the identification measure, participants were asked to indicate their agreement with 5 statements (α=0.73) about the current situation in the province, such as "I feel the current situation in the province of Groningen is unfair". These questions were designed to measure perceptions of responsibility, as we hypothesised that the legitimising condition would suggest to participants that the in-group (through their stereotypical traits) is partially responsible for the disadvantage the group faces. This suggestion could be resisted by rating the in-group less blame-worthy.

Collective Action. Participants' support for collective action on behalf of the group was measured with a 16-item scale referring to both normative (N=10, α=0.92) and non-normative (N=6, α=0.76) collective action, from protesting (normative) to arson (non-normative). Participants rated each of the

actions in terms of how much they would support this type of action, on a scale from 1 (not at all) to 9 (very much).

Procedure. Upon arrival to the lab, participants read the study information and provided informed consent. The cover story for the experiment explained that the study was concerned with "decision-making in a variety of contexts". Participants were randomly assigned to one of the two conditions and completed the threat manipulation followed by the dependent measures: the evaluative decision task, the math task, and the mood measure. They then indicated their identification with people from Groningen, before completing the dependent measures which explicitly referred to the intergroup context: the responsibility questions and the collective action measure. At the end of the study, participants completed a funnelled debriefing, in which they were asked to guess at the hypotheses. None of the participants correctly guessed the nature of the experiment. Finally, participants were given the opportunity to ask questions and were thanked for their participation.

Preliminary analyses. The mean of regional identification was slightly below the midpoint of the scale (M= 4.83, SD=1.61). Importantly, in-group identification was not affected by the manipulation (F<1), justifying its use as a covariate in the analyses presented below. We further examined whether participants were aware of the primes. None of the participants reported awareness of the subliminal primes. The reaction time data was cleaned using a predetermined cut-off. Reaction times falling 3SD outside the mean were excluded (6.5% of data points). This yielded a normal distribution (Kurtosis = 0.48, SE=0.06, p<0.631). The models presented below include a random Subjects factor, reflecting similarities between trials derived from the same participant.

Results

Evaluative decision task. Results showed a main effect of the type of target (F(1,6667) =9.51, p=0.003), such that positive targets produced faster responses than negative targets (M_{diff}=11.10 ms). There was no evidence for a 3-way interaction between exposure condition, type of target and type of prime (F<1). However, when including in-group identification in the model, the 4-way interaction reached significance (F(1,6665)= 6.98, p=0.008). Breakdown of this interaction showed that amongst high identifiers, the expected 3-way interaction of exposure condition, target type and prime type reached significance (F(1,6664)=5.23, p=0.022). Further breakdown showed that for

high identifiers in the legitimising condition, type of target and type of prime interacted ($F(1,6664)=7.99$, $p=0.005$). However, the simple effect was not in the expected direction. Amongst high identifiers in the legitimising condition, in-group-negative pairs were facilitated compared to out-group negative pairs ($M_{diff}=18.00$ ms, $F(1,6666)=5.97$, $p=0.015$, $d=0.18$). That is, high identifiers associated negative words more readily with the in-group than the out-group after exposure to the legitimising condition. Thus, instead of resisting the legitimising condition through in-group favouritism, high identifiers showed *in-group derogation* after exposure to implicit legitimising stereotypes. No other simple effects reached significance. The results are represented in Figure 6a.

Math task. Participants correctly completed 3.7 items out of 7 on average ($SD=1.60$) Performance was affected neither the exposure condition, nor in-group identification (all $Fs<1$, $ps>0.634$). Persistence in the math task was affected by a marginal interaction between exposure condition and identification ($F(1,61)=2.81$, $p=0.099$). Breakdown of the interaction showed that low identifiers are quicker to give up after exposure to the legitimising condition than after exposure to the control condition ($F(1,61)=3.22$, $p=0.078$). This suggests that the legitimising condition demotivates the low identifiers.

Mood. Results on the mood measure showed only a main effect of identification on positive mood: high identifiers reported experiencing more positive mood than low identifiers ($F(1,61)=9.43$, $p=0.003$, $d=0.43$). There were no effects of exposure condition ($Fs<1.36$, $ps>0.24$).

Legitimacy & Responsibility. Following the implicit measures, participants were asked explicitly to what extent they believed that the in-group was responsible for the disadvantage they faced. Results showed a main effect of exposure condition: those who were exposed to the legitimising condition saw the in-group as more responsible than those who were exposed to the control condition ($F(1,61)=6.60$, $p=0.013$, $d=0.34$). These findings show that participants interpreted the legitimising condition as implying that the in-group, through their stereotypical traits, is (partially) responsible for the disadvantage they face.

Collective action. Finally, participants were asked explicitly which measures they considered appropriate to combat in-group disadvantage. Moderate collective action tendencies showed a main effect of identification ($F(1,61)=12.91$, $p<0.001$, $d=0.47$), such that high identifiers indicated more support for moderate collective action than low identifiers. A marginal in-

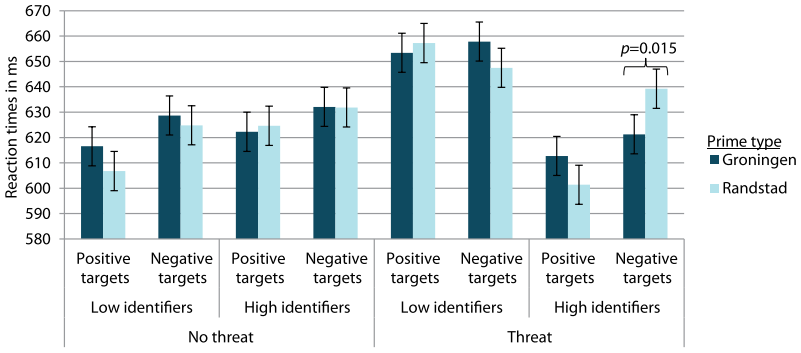
teraction between identification and exposure condition showed that this difference between high and low identifiers was particularly strong in the legitimising condition ($F(1,61)= 2.98$, $p=0.090$).

Radical collective action tendencies showed an interaction between identification and exposure condition ($F(1,61)=11.66$, $p<0.001$), such that high identifiers in the legitimising condition indicated more support for radical collective action relative to high identifiers in the control condition ($F(1,61)=8.72$, $p=0.005$, $d=0.39$), and relative to *low* identifiers in the legitimising condition ($F(1,61)=5.27$, $p=0.025$, $d=0.30$). Conversely, in the control condition, *low* identifiers were more supportive of radical collective action than high identifiers ($F(1,61)=9.82$, $p=0.003$, $d=0.41$). These findings are represented in Figure 6b and Figure 6c.

Taken together, these findings suggest that, relative to low identifiers, high identifiers are more likely to support moderate collective action, and after they have been exposed to implicit identity threat they are also more likely to support *radical* collective action.

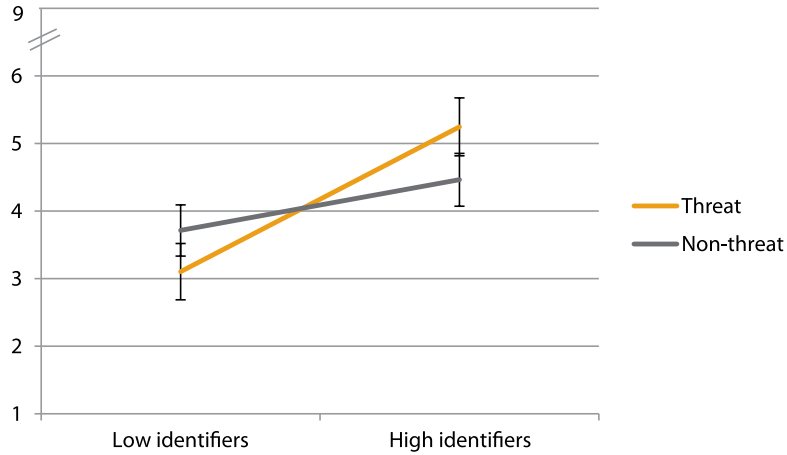
Summary. In conclusion, there was no evidence for implicit resistance following implicit identity threat. Once the issue of in-group disadvantage was made explicit to participants, however, collective action responses were stronger amongst high identifiers who were exposed to implicit identity threat during the manipulation phase.

Figure 6a: Responses to the evaluative decision task.



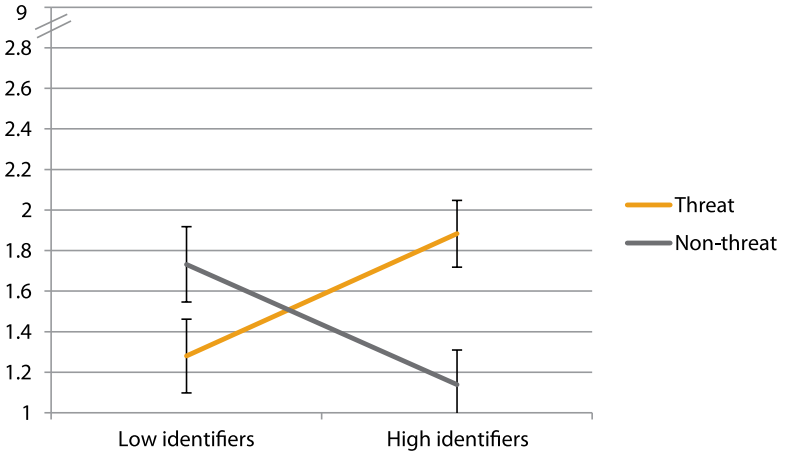
NB: Error bars represent 1 standard error. High and low identification with the in-group are plotted at ±1 standard deviation from the mean.

Figure 6b: Moderate collective action tendencies.



NB: Error bars represent 1 standard error.

Figure 6c: Radical collective action tendencies.



NB: Error bars represent 1 standard error.

Discussion

Findings from this study show no evidence for implicit resistance to implicit identity threat. Instead, participants *went along with* the manipulation. Those who were exposed to the legitimising condition perceived the in-group as more responsible for the disadvantage they face. Moreover, high identifiers showed implicit in-group derogation after exposure to the legitimising condition: they associated negative targets with the in-group more readily than with the out-group. That is, there was no evidence for resistance to implicit social identity threat. However, once the threat to the in-group was made explicit, there was evidence that people want to counteract this: high identifiers who had been exposed to threatening in-group associations during the manipulation phase indicated more support for radical collective action. That is, high identifiers exposed to implicit identity threat, became more willing to act against in-group disadvantage *once the issue was made explicit*. This suggests they were motivated to resist, but were unable to do so at the implicit level (Barreto et al., 2010; Kray et al., 2001). In other words, resistance to implicit legitimising stereotypes was absent, even though participants did pick up on the threatening implications of the implicit information with which they were presented, as evidenced by the effects of the manipulation on perceived in-group responsibility and (amongst high identifiers) in-group derogation.

Though this study showed no evidence of implicit resistance to implicit social identity threat, we do believe that these findings are of interest, precisely because they differ from findings of previous studies. On the one hand, the absence of resistance to implicit identity threat may be due to the fact that, in this chapter, the in-group is made responsible for their own disadvantage. That is, responsibility for disadvantage is a within-group issue. Conversely, in Chapter 5, the Spanish were made responsible for an economic crisis which has affected all of Europe, and arguably, therefore, they are made responsible at an intergroup level. These different "levels" of responsibility could have led to a less intense threat experience in the current study compared to Chapter 5. Secondly, it could be that resistance is absent because participants have internalized and accepted the negative view of their in-group. However, the findings regarding radical collective action, suggest that at least for high identifiers this is not the case. Alternatively, resistance may be absent because threat to regional identity is less familiar, and therefore less salient, to participants than threat to gender identity (Chapters 3 and 4) or national identity (Chapter 5). Perhaps chronic salience of a threat is needed for group

members to build up resilience, allowing them to resist implicit forms of that threat (Kaiser, et al., 2006). In the context of the current study, this implies that participants pick up on the implicit information, and experience implicit social identity threat, but because they are not chronically exposed to this type of threat, they are less able to resist. Though speculative, this explanation suggests that coping resources develop or build up over time as a result of chronic exposure to identity threat, ultimately allowing people to resist *implicit* occurrences of identity threat.

In sum, the data presented in this chapter show that there are circumstances in which resistance to implicit stereotypes does *not* occur. Such null findings are relevant in providing an indication of the boundary conditions of the effect being studied, and as such contribute to a fuller understanding of resistance to implicit identity threat.

A boundary condition

6

7

General Discussion

The main aim of this dissertation was to study whether members of disadvantaged groups can resist implicit social identity threat. Across the five empirical chapters, we showed that 1) resistance to implicit identity threat is possible, 2) that resistance can take a number of different forms, and 3) that it occurs across different contexts. In this final chapter, we will present an overview of the findings, and discuss the theoretical and practical implications, as well as the limitations of the current work. We will also highlight some issues that offer interesting directions for future research.

What did we find?

Chapter 2. The chapters on resistance to implicit identity threat in the context of gender were prefaced by Chapter 2, which examined how women think about gender group membership. Chapter 2 showed that attitudes towards gender are governed by two different identity dimensions: identification with women as a group, and identification with feminists. Study 2.1 showed that women's identification reflects attitudes towards the meaning of group membership. Feminist identification reflects the belief women as a group are devalued in the larger social system. These identities have only a small positive correlation, and based on this finding we proposed a taxonomy of four prototypical gender identity subgroups that reflect differences in the aspects of the social construction of group membership that women emphasise.

In Study 2.2, we examined whether this taxonomy could predict resistance-type responses by studying whether it affects tendencies towards moderate and radical collective action. Indeed, results showed that radical collective action on gender issues is endorsed most strongly by "distinctive feminists", women who identify highly with feminists but not women. In Studies 2.3 and 2.4 we showed that the taxonomy also predicts critical attitudes towards gender stereotypes: critical attitudes towards gender stereotypes were most prominent amongst distinctive feminists.

In sum, Chapter 2 showed that women's attitudes towards gender group membership are governed by two distinct identity dimensions: women's identification and feminist identification. Critical attitudes towards gender stereotypes, and endorsement of resistance strategies like radical collective action, are strongest amongst distinctive feminists. Subsequently, we examined resistance at the *implicit* level.

Chapter 3. Chapter 3 described the first evidence for resistance against

implicit identity threat. Women were exposed to implicit associations reflecting gender stereotypes (or counter-stereotypes). Responses to these implicit gender stereotypes were measured using an evaluative decision task, in which participants are required to associate in-group and out-group primes with positive and negative target words.

Across three studies, Chapter 3 showed that exposure to implicit stereotypes leads *low* feminist identifiers to think more stereotypically about their group but leads *high* feminist identifiers to experience threat. Distinctive feminists subsequently resist this threat, through implicit in-group bias. After exposure to implicit stereotypes, distinctive feminists associated positive attributes more readily with the in-group (women) than with the out-group (men). That is, those who were shown, in Chapter 2, to find gender stereotypes most problematic, were also found to resist stereotypes when they are presented at the implicit level. Study 3.3 also included a behavioural measure, which showed evidence for resistance: distinctive feminists showed increased persistence in a counter-stereotypical, but not a stereotypical, performance domain. This suggests that after exposure to implicit gender stereotypes, these women were motivated to disprove stereotypes by making more effort in a counter-stereotypical domain (mathematics). Together, the studies that make up Chapter 3 showed that resistance to implicit stereotypes is possible, both through evaluative strategies and through behaviour.

Chapter 4. Chapter 4 extended evidence from Chapter 3 by showing that resistance to implicit social identity threat also occurs through responses that focus on the out-group, namely through out-group derogation. To the extent that implicit stereotypes imply that men are valued over women, this could be resisted by *boosting* women, or by *downgrading men*. Chapter 3 showed evidence for the former response. In Chapter 4, we focused on the latter response, and examined whether implicit gender stereotypes can be resisted through out-group derogation, that is, by downgrading men. Across 2 studies, women were exposed to implicit gender stereotypes, and asked to complete a Moral Choice Dilemma task in which one person must be sacrificed to save the lives of a number of others. Results showed that distinctive feminists more readily sacrificed men after exposure to implicit stereotypes, compared to implicit counter-stereotypes. That is, distinctive feminists treated the out-group (men) as relatively more expendable after exposure to implicit gender stereotypes.

Chapter 5. The aim of Chapter 5 was to provide more information about implicit social identity threat as a trigger for resistance, by manipulating the interpretation of implicit stereotypes as more or less threatening to identity. This chapter used Spanish-German intergroup relations in the context of the economic crisis in Europe. Spanish participants were exposed to implicit associations that reflected either a non-threatening control condition, in-group stereotypes, in-group disadvantage, or in-group stereotypes that *legitimised* disadvantage. Results from 2 studies showed that resistance is most pronounced in the condition where implicit social identity threat is strongest, that is, when stereotypes legitimise intergroup inequality.

In Study 5.1, resistance took the form of in-group favouritism: participants more readily associated positive targets with their own group, rather than the out-group. In Study 5.2, resistance took the form of out-group derogation: participants more readily associated negative targets with the out-group rather than the in-group. Thus, Chapter 5 replicated the findings of Chapters 3 and 4 in the context of national identity. Moreover, Chapter 5 showed that resistance is triggered in response to implicit information that legitimises intergroup inequality, thereby providing further evidence for the role of implicit social identity threat as a trigger for resistance.

Chapter 6. In Chapter 6, we attempted to replicate findings of Chapter 5 in the context of regional identity in the Netherlands. Results of this study showed no evidence for resistance to implicit social identity threat. In fact, there was some evidence for in-group derogation: instead of resisting, participants seemed to accept the threatening implications of implicit stereotypes at the implicit level. One possible explanation for why resistance did not occur here is that the intergroup context was unfamiliar to participants. Though preliminary, this line of reasoning suggests that, if participants are not familiar with the context of threat in their daily lives, they cannot build up resilience, and implicit forms of that threat cannot be resisted. As such, this interpretation suggests that previous exposure to identity threat is an important factor that allows members of disadvantaged groups to resist implicit social identity threat.

Although this chapter showed no evidence for resistance to implicit identity threat, we considered it worthwhile to include these findings, not only for the sake of completeness and transparency, but also because it illustrates an important boundary condition of resistance to implicit identity threat. This chapter thus offers a cautionary note, illustrating that the familiarity of the

threatening context represents an important limit on the resistance to implicit identity threat.

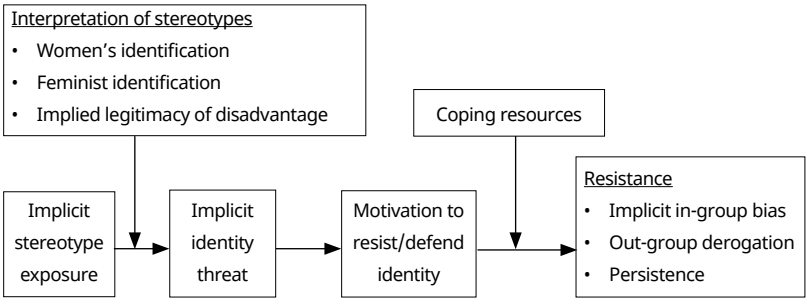
A model of resistance to implicit threat. Summarising the findings of the empirical chapters graphically illustrates the process behind resistance to implicit social identity threat (see Figure 7.1). Specifically, the occurrence of resistance seems to depend on 2 important criteria: the presence of implicit social identity threat, and the availability of coping resources. Such a 2-part model is reminiscent of stress-and-coping models (Lazarus & Folkman, 1991) in which the primary appraisal reflects the assessment of the stressor as threatening or not, and the secondary appraisal reflects the resources to cope with the stressor.

In our model, then, the first criterion for resistance is the experience of implicit social identity threat. As discussed above, findings from the empirical chapters underscored that resistance occurs in those circumstances, and amongst those people, where implicit stereotypes are most threatening to identity. The fact that not all associations that were presented during the manipulation phase were resisted, but only those that were threatening to identity, further suggests that resistance is the result of a motivated process, specifically, the motivation to resist identity threat and defend social identity. In addition to this, Chapter 3 showed evidence for resistance through behavioural persistence, which has been described as the 'hallmark' of motivational processes such as goal pursuit (Bargh et al., 2001; Gollwitzer & Schaal, 2001). Based on these findings, the model presented in Figure 7.1 includes a motivational component: when implicit social identity threat is present, people become motivated to defend their social identity and resist the threat, which then triggers resistance as a way of fulfilling this motivation.

However, there is also evidence that the motivation to resist implicit social identity threat is not sufficient for resistance to occur: people must also have the resources to resist. Chapter 6 provided some preliminary evidence that such resources may need to build up over time, as chronic exposure to the threatening context increases. Specifically, Chapter 6 indicated that when chronic familiarity with the threat is lacking resistance to implicit social identity threat does not occur, even though participants did seem to experience implicit identity threat. The joint role of motivation and opportunity is familiar from models such as the MODE model, which postulates that the extent to which attitudes guide behaviour depends on people's motivation and opportunity to control their behaviour (Fazio, 1990; Olson & Fazio, 2008).

Implicit social identity threat, then, leads to the motivation to resist, which in turn leads to resistance when coping resources are available. The last component of the model shows that resistance to implicit social identity threat can take a variety of forms, namely implicit in-group bias (Chapters 3&5), (implicit) out-group derogation (Chapters 4 & 5), and persistence in counter-stereotypical domains (Chapter 3).

Figure 7a Conceptual model of resistance to implicit social identity threat



What have we learned?

About resilience amongst disadvantaged groups. The main aim of this dissertation was to examine resilience amongst members of disadvantaged groups. Given evidence that social devaluation of disadvantaged groups takes increasingly subtle forms, we focused specifically on resilience in the face of *implicit* cues of devaluation. Until recently, it seemed that threatening cues that are present at the implicit level cannot be resisted (Barreto et al., 2010; Kray et al., 2001). In contrast, in this dissertation we argue that members of disadvantaged groups are able to resist threats to their social identity even when they occur outside of conscious awareness, and consequently that their resilience extends to the implicit realm. Indeed, the empirical chapters of this dissertation provided evidence for such resistance to implicit social identity threat. The findings of this dissertation are in line with theories of intergroup relations that argue that members of disadvantaged groups can challenge and resist unequal group relations. Specifically, our findings provide support for Social Identity theory (Tajfel & Turner, 1979; Spears et al., 2001; Ellemers et al., 2002), in showing that identity concerns influence the processing of implicit information. Only recently have theorists begun to study whether and how existing frameworks of social relations might be applied to the implicit

realm (de Lemus et al., 2013; Kray et al., 2001; Ramos et al., 2015). As such, this dissertation represents an important step in the application and extension of Social Identity theory to the implicit realm, by showing that members of disadvantaged groups are more resilient than previously thought, and can resist threats to social identity that occur outside of conscious awareness.

About the nature of resistance.

Resistance is triggered by implicit identity threat. Our definition of resistance postulates that resistance arises in response to implicit social identity threat, and there are several aspects of the findings that support this notion. In the chapters on gender identity, the role of implicit social identity threat is evidenced by the fact that resistance is found only amongst the distinctive feminists, who were shown to find stereotypes threatening, both at the explicit level (Chapter 2) and at the implicit level (Chapter 3: approach-avoidance task). Similarly, in Chapter 5, resistance occurred only in those conditions that represented the greatest (implicit) threat to social identity for our Spanish participants. That is, resistance varies over people and circumstances in such a way that it occurs only when implicit social identity threat is high, suggesting that it is a response to implicit social identity threat. Moreover, our findings cannot be explained by features of the manipulation other than implicit social identity threat, such as its valence, or its reference to stereotypes *per se*. Firstly, there is evidence that resistance is not just a response to the (negative) valence of the in-group associations. In Chapter 3, the stereotypes used in the manipulation were pretested to be neutral. Conversely, Chapter 5 used negatively valenced stereotypes in three out of four conditions, but resistance occurred in only one of those conditions. That is, resistance is not due to the valence of the associations shown. Moreover, Chapter 5 excluded the possibility that resistance is triggered by stereotypes *per se*. There were 2 conditions that exposed participants to implicit in-group stereotypes, but only one of those conditions produced resistance. Taken together, the findings from the empirical chapters support our hypothesis that resistance is a response to implicit social identity threat.

Our definition of resistance not only posits that resistance is a response to implicit social identity threat, but more specifically, that it is a response that *counteracts* implicit social identity threat. Again, we believe that the empirical chapters provide considerable evidence for this notion. We have seen that resistance to implicit social identity threat can occur through in-group favouritism (Chapters 3 and 5), or through out-group derogation (Chapters 4 & 5).

Both these responses can counteract implicit identity threat, and restore positive social identity, either directly (in-group favouritism) or in relative terms (out-group derogation). To illustrate this, we can take the example of Chapter 5, which focused on national identity in Spain. In that chapter, the manipulation made negative associations with the in-group and positive associations with the out-group. Participants counteracted this by reversing the associations: they made positive associations with the in-group (Study 5.1) and negative associations with the out-group (Study 5.2). Moreover, implicit identity threat arising from stereotypes can also be counteracted by persistence in a counter-stereotypical performance domain (see Chapter 3): persistence in a counter-stereotypical domain reflects motivation to achieve in that domain, and disprove negative stereotypes of the in-group. Taken together, though there are several different forms resistance can take, all of these are aimed at counteracting implicit social identity threat.

Resistance is motivated. The motivational, rather than cognitive, basis for the effects reported in these studies is evident from several different observations. For instance, Motivational effects are known to be less susceptible to rapid decay than cognitive effects (Förster et al., 2007; Kuhl, 1987). Here we found that, in some cases, resistance was evident from measures completed later in the experimental procedure, but not present on measures earlier in the procedure. Moreover, in Chapter 3, resistance was evident from a measure of behavioural persistence, which has been described as a 'hallmark' of motivational processes such as goal pursuit (Bargh et al., 2001; Gollwitzer & Schaal, 2001), which provides further evidence resistance is the outcome of a motivational process. More specifically, findings from this dissertation show that resistance to implicit social identity threat is internally motivated, as internally motivated goals and goals that serve psychological functions are known to have more behavioural consequences than externally imposed or instrumental goals (Gollwitzer & Bargh, 1996). Several experimental interventions have shown that it is possible to recondition implicit responses though externally imposed instructions or training. For instance, classical conditioning techniques - pairing stigmatized groups with positive images and words – can reduce students' implicit stereotypes about groups like the elderly, black Americans, or skinheads (Devine, Forscher, Austin, & Cox, 2012; Karpinski & Hilton, 2001; Kawakami et al., 2000; Olson & Fazio, 2008). Crucially though, in the case of resistance, such training is not necessary - resistance "comes from within", rather than being imposed externally. For these rea-

sons, cognitive salience or related explanations cannot readily account for the findings of these studies. Instead, we argue that the functionality of resistance in addressing and redressing specific components of implicit social identity threat is evidence that resistance is the outcome of a motivated process.

About forms of resistance. If we compare the resistance responses observed in this dissertation to resistance responses that have been documented in response to *explicit* social identity threat we see considerable overlap. For instance, intergroup bias has often been documented in response to explicit social identity threat (Voci, 2006; Oakes & Turner, 1980). Previous studies have also found that persistence in counter-stereotypical domains is used as a way of addressing explicit social identity threat (e.g. Nussbaum & Steele, 2007). Here we show for the first time that implicit forms of these responses are also used to resist identity threat that occurs at the implicit level. The implicit focus of the resistance responses documented in this dissertation also differentiates them from identity management strategies documented in the literature on social identity theory (Ellemers et al., 1993; Spears et al., 2001; Tajfel & Turner, 1979). Until now, the possibility of identity management through implicit strategies has not featured in SIT. Yet, findings from this dissertation, together with previous research (de Lemus et al., 2013, 2017; Ramos et al., 2015), underscore the fact that identity management can indeed happen through implicit strategies. Specifically, the resistance responses documented here extend the idea of social competition to the implicit level.

The resistance that was observed in these studies occurred at the same level as the threat: when threat to social identity was implicit, resistance responses were either implicit (implicit in-group bias; implicit out-group derogation) or indirect (persistence; willingness to sacrifice). All studies reported in the empirical chapters included measures of explicit resistance alongside implicit and indirect measures, but robust effects were rarely found, and if so, did not demonstrate evidence for resistance. There are several possible explanations for why resistance occurred on implicit and indirect rather than explicit measures. Firstly, as the explicit measures make the intergroup context explicit, they had to be completed at the end of the study, and the effects of the implicit manipulation could have worn off by the time the explicit measures were completed. This might be reinforced by a sense of goal completion after resisting on the implicit measures, leading to goal inhibition (Rothermund, 2003). Alternatively, it could be that implicit social identity threat is simply too subtle to elicit explicit resistance. The fact that implicit social identity threat

cannot be consciously evaluated or attributed to any source (Major et al., 2003) might make explicit resistance strategies such as anger, protesting and explicit in-group bias less viable. That is, in dealing with an implicit threat, implicit strategies are perhaps more applicable. Together, these factors could explain why resistance to implicit social identity threat is more likely to occur on implicit or indirect rather than explicit measures. A third possibility is that explicit resistance to implicit social identity threat is possible, but simply did not occur in these studies, because we did not use appropriate explicit measures. Given that our focus on *implicit* dependent variables is an important reason why our findings show evidence for resistance to implicit social identity threat while previous studies did not, it seems that the choice of outcome measure is an important one in the context of resistance to implicit social identity threat.

The fact that resistance to implicit social identity threat did not occur on explicit measures, means that the findings of this dissertation are in line with the findings of previous studies; that implicit social identity threat does not lead to *explicit* resistance. However, our findings do not support the conclusions of previous work: namely that implicit social identity threat cannot be resisted. Because we draw upon implicit measures of resistance, we were able to show that implicit social identity threat *can* be resisted, but that this resistance occurs primarily through implicit or indirect strategies rather than through explicit strategies.

About the role of intergroup inequality in resistance. In introducing the topic of resistance to implicit social identity threat, we have focused on intergroup inequality as an important antecedent of (implicit) social identity threat. So is there any evidence that intergroup inequality plays a role in the effects observed in this dissertation? Previous research has shown that stereotypes play a role in intergroup inequality, by legitimising the social system (Kressel & Uleman, 2015; Reyna et al., 2006). But the question is whether people perceive this at the implicit level, and whether it affects resistance to implicit social identity threat. In Chapters 5 and 6 we manipulated the interpretation of stereotypes to answer to this question. Results showed that resistance occurred only when stereotypes legitimised intergroup inequality. This suggests that the broader social system of intergroup inequality is an important reason why implicit stereotypes threaten social identity. This line of reasoning is supported by findings from Chapter 6 suggesting that the context in which the threat occurs must resonate with the group's experiences with-

in the broader social system. If this is not the case, the threat is unfamiliar, and resistance to implicit social identity threat does not occur. Thus, it seems that the social system of intergroup inequality is an important reason why implicit stereotypes are threatening to social identity and ultimately trigger resistance.

About implicit processing. This dissertation adds to a growing body of work showing that implicit processing is not an associative, stimulus-response system, but shaped by goals and motivations (Glaser & Knowles, 2008; Moskowitz et al., 2000; Moskowitz & Li, 2011). The empirical chapters show that these motivations include *identity motivations*: implicit information is evaluated in terms of its implications for identity, and managed accordingly. In fact, these findings are in line with a broader trend in which implicit and automatic processes that were previously thought to be associative are shown to depend on participants' interpretation and evaluation of the stimuli in question. One example of this is evaluative conditioning. Evaluative condition is a process whereby an originally neutral stimulus acquires the valence of another stimulus paired with it. This effect was thought to arise out of purely associative processes, but recent evidence shows that evaluative conditioning effects are partly due to allocation of attention (Dedonder, Corneille, Yzerbyt, & Kuppens, 2010), and propositional knowledge (Hu, Gawronski, & Balas, 2017). This dissertation, then, shows that identity concerns affect how people respond to implicit information.

Societal implications of findings

In addition to the theoretical implications discussed above, this dissertation also has a number of societal implications. Firstly, this dissertation has implications for how we approach implicit biases in our daily lives. Previously, we touched upon the fact that biases are deeply ingrained, and very difficult to eradicate. Evidence that victims of these biases are able to resist implicit social identity threat could be taken to suggest that it is not necessary to confront such implicit biases because victims are able to resist their detrimental effects before they reach conscious awareness. Nevertheless, we would like to argue that we should continue to try to understand and eradicate our implicit biases towards members of out-groups (which would then render implicit resistance unnecessary). Firstly, Chapters 3 and 4 show that resistance varies over individuals: not all members of disadvantaged groups resist. In fact, Chapters 3 and 4 showed those who do *not* identify with femi-

nists associated their group with *more* stereotypical attributes after exposure to implicit stereotypes. That is, some people went along with implicit devaluation of their in-group. Thus, given that not everyone resists implicit cues of in-group devaluation, it is important to continue to fight implicit biases.

We also believe that it is worth reconsidering the extensive list of devalued social groups mentioned in the introduction. Groups that face devaluation in our society include ethnic groups, women, those with non-heterosexual identities, the lower-educated, the poor, people who are overweight, the elderly and many other groups. This long list means that when we say "members of disadvantaged groups" this includes nearly everyone, depending on which identity is salient in a certain context. Although these groups clearly differ in the extent of their disadvantage and the frequency with which group members are confronted with devalued group membership, the crucial issue is that the processes described affect nearly all of us. We might wonder whether all of the groups listed above would be able to resist implicit social identity threat. In principle, there is no reason why it should not be possible to observe resistance to implicit identity threat in contexts such as ethnic group membership or sexual identity groups. However, we would expect this only in cases that conform to the requirements described in the model above. That is, resistance to implicit social identity threat is expected to occur only amongst group members who experience implicit social identity threat, are motivated to resist, and have the resources to do so.

'What good is implicit resistance?' Given that we interpret resistance to implicit identity threat as a form of resilience on the part of members of disadvantaged groups, it is relevant to consider whether resistance to implicit identity threat is functional in reducing threat, or beneficial to the person in some other way. Firstly, resistance to implicit social identity threat could reduce the subsequent experience of threat. This notion is theoretically compatible with the idea of resistance, and there is some evidence for such a process in Chapter 5. There was evidence for two different types of resistance, but each was strongest when the other was weak, suggesting that once one type of resistance had taken place, the other became less necessary (Heine et al., 2006; Tesser, 2000). This effect could be due to resistance reducing threat experience, after which further resistance is no longer necessary. However, resistance need not *necessarily* reduce threat directly. In fact, it could be important to remain vigilant to the threat. After all, the experience of threat is part of what allows resistance to take place. Thus, rather than reducing the

threat in a particular instance, resistance could serve to build up resilience and efficacy to confront *future* instances of threat. Alternatively, the beneficial effects of resistance might occur more "down-stream" of threat experience. For instance, resistance might protect against detrimental effects of threat on self-esteem or negative emotion (Barreto et al., 2010). Previous research has shown some evidence for such beneficial effects of identity management for those who engage in them. Sherman and colleagues (2009) have shown that participants who completed an implicit self-affirmation task subsequently showed improved performance and reduced defensive bias in response to threatening information. Similarly, the beneficial effects of resistance can lie in the feeling of "having done something", increasing feelings of empowerment and efficacy (see e.g. Cocking & Drury, 2004; Drury & Reicher, 2005, for examples in the context of collective action) without necessarily making the threat itself less acute. Evidence for such a process has been demonstrated in the context of gender identity: feminist identification is known to increase the experience of gender identity threat and perceptions of sexism (e.g. Moradi & Subich, 2002), but at the same time a well-developed feminist identity has beneficial consequences for well-being (K. J. Saunders & Kashubeck-West, 2006) and body image (Murnen & Smolak, 2009). This suggests that awareness of disadvantage is associated with threat and discomfort in the short term, but ultimately contributes to well-being. This might similarly apply to resistance: though it might not reduce threat directly, it could still encourage resilience in the long run. Thirdly, it is possible that beneficial effects of resistance simply lie in the fact that resistance means that the implicit devaluation of the ingroup is not accepted. In other words, the beneficial effects of resistance may lie in the fact that it is oppositional to acceptance. Finally, possible beneficial effects of resistance to implicit identity threat can lie in contributing to changes in status quo or attitudes of perceivers. As we have seen in Chapter 3, resistance can take the form of persistence in counter-stereotypical performance domains. Such (attempts at) non-conformity to stereotypes could have positive effects beyond the experience of the individual, but rather at a group level. The reduced stereotype conformity of those who resist implicit identity threat could contribute to weakening stereotypical attitudes of perceivers, and as such ultimately contribute to changes in intergroup relations. Thus, there are many ways in which resistance to implicit social identity threat can have beneficial effects. Nevertheless, in this dissertation we have not directly tested this issue, and as such this is an important avenue for future research.

Future Directions

The findings of this dissertation also give rise to some new questions regarding resistance to implicit identity threat that provide interesting directions for future research.

The role of motivation. Above, we have argued that resistance is the outcome of a motivated process. While we believe this dissertation offers considerable evidence for such a link between motivation and resistance, several questions remain regarding the relationship between social identity threat and motivation. Specifically, in the model presented in Figure 7.1, the motivation to resist follows directly from the experience of implicit social identity threat, suggesting that whenever a person experiences implicit social identity threat, this will increase the motivation to resist. This is in line with stress-and-coping models that we have referred to previously (Lazarus & Folkman, 1991), in which exposure to a stressor induces the motivation to address it. However, motivation could also function as a moderator of the relationship between implicit social identity threat and resistance, such that implicit social identity threat leads to resistance *only when* the motivation to resist is also high, thus representing a third criterion for resistance alongside threat experience and coping resources. This latter alternative is in line with the MODE model (Fazio, 1990) and would suggest that there are circumstances in which the experience of implicit social identity threat is high, but the motivation to resist is not. In sum, more evidence for the relationship between social identity threat and motivation would be beneficial to our understanding of resistance to implicit social identity threat.

Encouraging resistance. Given that not everyone resists, we might consider possibilities of encouraging people to develop resistance to implicit threat. In considering the options for this, we must first study why some people do *not* show resistance to begin with. Firstly, it is possible that people do not resist because they do not experience implicit identity threat. Alternatively, it is possible that people experience implicit social identity threat, but are unable to resist. Resistance to implicit cues of devaluation would be desirable in both these cases. To the extent that resistance is a response to cope with social identity threat, resistance would not be needed if the individual does not experience social identity threat. However, previous studies have demonstrated that implicit stereotype exposure often leads to stereotype conformity, which can have detrimental effects on the group beyond the individual. Therefore, it seems worthwhile to try to encourage resistance to

implicit cues of devaluation even amongst those who do not experience them as threatening. One way to do this would be to attempt to increase threat experience, for instance by raising awareness, just as has been done for explicit devaluation (Aldana, Rowley, Checkoway, & Richards-Schuster, 2012; Rosenthal, 1984). Similarly, Chapter 6 indicated that increasing exposure to the threatening context can serve to build up resilience, amongst those people who are unable to resist at the implicit level even though they do experience implicit identity threat. However, an important drawback of such approaches that focus on increasing implicit social identity threat is their ethical implications, and it seems preferable to encourage resistance to implicit in-group devaluation without increasing threat experience. That is, we might be able to encourage the resistance *response* without first triggering implicit social identity threat, for instance by training people to develop positive or counter-stereotypical in-group associations.

In sum, having established that resistance to implicit social identity threat is possible, future work should study the factors that determine its presence or absence, and the possibility of encouraging resistance to implicit social identity threat through policy or training.

Motivated conformity. Finally, aside from future directions focusing on further examining the processes involved, future research could also focus on examining the experience of members of disadvantaged groups more broadly. Specifically, here we consider resistance to be a motivated response, but have not considered the possibility that conformity to stereotypes may be a motivated response as well. That is, instead of passively accepting stereotypes, people may *actively* accept them. For instance, factors that increase affiliation motivations (e.g. mimicry) have been shown to increase stereotype conformity (Leander, Chartrand, & Wood, 2011; Sinclair, Huntsinger, Skorinko, & Hardin, 2005), suggesting that affiliation increases the motivation to act in line with the interaction partner's expectations. Thus, under some circumstances, conformity to stereotypes may be a motivated response aimed at smoothing social interaction.

Strengths & Limitations

When interpreting the findings of this dissertation it is worth noting a number of strengths and limitations to this work.

Strengths. The work comprising this dissertation has a number of strengths. Firstly, in terms of study design, we studied the phenomenon of

resistance to implicit social identity threat in a number of different contexts, notably gender identity, national identity and regional identity. Additionally, in the context of national identity in Spain, we were able to manipulate the implications of stereotypes: in the context of gender, stereotypes associated with women, and the devaluation and disadvantage they imply are closely intertwined. Especially amongst women who are highly identified with feminists, exposure to gender stereotypes likely brings to mind immediately the disadvantage faced by women in society. However, in the context of national identity this link is less strong, and we were able to disentangle how stereotypes, and their implications for devaluation, independently contribute to resistance. Additionally, we used different outcome measures to demonstrate that resistance can take different forms. Our studies also included a number of explicit outcome measures which were present in previous studies. This allowed us to replicate findings from previous studies that demonstrated that resistance to implicit social identity threat is not evident on explicit measures.

In terms of methodology, strengths of this work include its use state-of-the-art analytical methods such as pooled analysis (or Integrative Data Analysis, Curran & Hussong, 2009) and the use of multilevel modelling to analyse reaction time data. These analytical methods allowed me to collapse studies with the same design, and account for variance explained by random factors. In this way, we were also able to control for differences between samples, and differences between individuals, which increases the statistical power of the analyses and reduces vulnerability to statistical artefacts.

Limitations. In terms of limitations, it is important to note that our manipulations relied quite heavily on stereotypes. There were a number of reasons why stereotypes were a suitable basis for our manipulations of implicit social identity threat. Firstly, stereotypes are socially shared, which means that group stereotypes are familiar to both in-group and out-group members (Chen et al., 2004; Crocker, 1999). Moreover, stereotypes can be presented implicitly in an experimental context (Banaji & Hardin, 1996; Hess, Hinson, & Statham, 2004), allowing us to draw upon this work to inform our methodology. Additionally, stereotypes need not be negative in valence, which means that the effects shown are not confounded with valence. Based on these considerations, we selected stereotypes as a basis for our manipulations of implicit social identity threat. Though we believe the empirical chapters provide substantial evidence that it was not stereotypes *per se* that gave rise to resistance, it would nevertheless be worthwhile to examine resistance to

implicit identity threat arising from sources other than implicit stereotype exposure. For instance, future research might focus on threat arising from implicit performance feedback. Such a line of research could not only inform us on resistance to implicit identity threat based on concerns other than stereotypes, but also about the possibility of resistance to implicit threat arising from individual rather than group-based threat.

An additional limitation of this work, in terms of methodology, is the fact that nearly all of these studies rely on student samples, except Study 2.3. Student samples differ from community samples in age and level of education, which may have affected the findings of our studies. In the case of national or regional identity there is no reason to expect great differences based on these factors, but in the context of gender, for instance, levels of feminist identification might depend on a woman's age (Zucker & Stewart, 2007). Therefore, it would be worthwhile to replicate these findings with non-student samples.

Concluding remarks

Social inequality and devaluation is deeply ingrained in many societies, including our own. Importantly, there is evidence that such social devaluation is expressed in increasingly subtle ways. When cues of social devaluation are subtle or even implicit, this can lead members of disadvantaged groups to experience implicit social identity threat. This is especially pernicious, because implicit social identity threat is more difficult to recognise and to address directly, and research suggests that this undermines resilience (Kray et al., 2001; Major et al., 2003). In other words, previous research indicates that implicit social identity threat cannot be resisted, but instead leads to acceptance and conformity. This dissertation disputes whether this has to be so and focuses on the possibility of *resistance* against implicit social identity threat. Evidence from five empirical chapters shows that members of disadvantaged groups can build up psychological resilience, like physical immunity, and resist implicit social identity threat through evaluative and behavioural responses. As such, this dissertation highlights how implicit cues of social devaluation can inspire disadvantaged groups to choose the path of most resistance.

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Supplementary Materials

Chapter 2

Study 2.1. In this section readers can find the correlations between different measures in study 2.1 (see Table A), and a description of additional measures not described in the Chapter itself.

Method.

Inclusion of the self in other scale. This scale requires participants to select one from a series of 7 pictures (Schubert & Otten, 2002). Each picture shows a circle labelled "self" and a larger circle labelled with the group name. Consecutive pictures show decreasing distance between the self and the group. Thus, the first picture shows considerable separation of the self and the group, in the final picture the self is completely within the group circle. Two versions of this scale were used, one asking about the distance between self and women as a group and the other asking about the distance between women and men.

Gender Role Preferences. The 8 items of the gender role preference scale (Becker & Wagner, 2009) examine participants' gender role preferences (α=0.81). This scale was included to compare results for our measure of feminist identification to results for this scale (Becker and Wagner, 2009).

Results.

Inclusion of the self in women as a group. The extent to which participants perceived overlap between themselves and women as a group, was predicted by both women's identification and feminist identification (women's ID: β=0.43, $F(1,85)=20.01$, $p< 0.001$; feminist ID: β=0.21, $F(1,85)=4.76$, $p=0.032$). The item asking about the overlap between women as a group and men as a group was not predicted by either of the identification variables (Fs<2.99, ps>0.87).

Gender role preference. Scores on the Gender Role Preference scale were not predicted by women's identification or feminist identification (Fs<1).

Table A. *Correlation table Study 2.1*

		Women's ID	Feminist ID	Femininity	Self-stereotyping	Solidarity	Satisfaction	Homogeneity	Attitudes to the Feminist movement	Modern Sexism	Disadvantage	Hostile Sexism
Women's ID	Correlation	1.000										
	Significance											
Feminist ID	Correlation	**0.18**	1.000									
	Significance	0.101										
Femininity	Correlation	**0.62**	**0.01**	1.000								
	Significance	0.000	0.961									
Self-stereotyping	Correlation	**0.48**	**0.15**	**0.52**	1.000							
	Significance	0.000	0.167	0.000								
Solidarity	Correlation	**0.60**	**0.39**	**0.40**	**0.52**	1.000						
	Significance	0.000	0.000	0.000	0.000							
Satisfaction	Correlation	**0.55**	**0.12**	**0.50**	**0.46**	**0.40**	1.000					
	Significance	0.000	0.256	0.000	0.000	0.000						
Homogeneity	Correlation	**0.11**	**0.01**	**0.35**	**0.48**	**0.23**	**0.23**	1.000				
	Significance	0.303	0.912	0.001	0.000	0.034	0.032					
Attitudes to the Feminist movement	Correlation	**0.21**	**0.50**	**0.10**	**0.07**	**0.31**	**0.14**	**0.01**	1.000			
	Significance	0.055	0.000	0.353	0.541	0.004	0.197	0.914				
Modern Sexism	Correlation	**0.04**	**0.31**	**-0.21**	**-0.39**	**-0.06**	**-0.12**	**-0.31**	**0.47**	1.000		
	Significance	0.719	0.003	0.059	0.000	0.578	0.262	0.014	0.000			
Disadvantage	Correlation	**-0.05**	**0.42**	**-0.13**	**-0.29**	**0.04**	**-0.21**	**-0.11**	**0.32**	**0.56**	1.000	
	Significance	0.654	0.000	0.218	0.006	0.740	0.056	0.299	0.003	0.00		
Hostile Sexism	Correlation	**-0.17**	**-0.26**	**0.02**	**-0.01**	**-0.07**	**-0.02**	**0.18**	**-0.47**	**-0.44**	**-0.28**	1.000
	Significance	0.123	0.017	0.848	0.945	0.533	0.858	0.097	0.000	0.000	0.010	
Benevolent Sexism	Correlation	**0.06**	**0.07**	**0.19**	**0.24**	0.20	0.16	0.25	-0.14	-0.38	-0.14	0.57
	Significance	0.580	0.523	0.086	0.067	0.067	0.151	0.020	0.155	0.000	0.211	0.000

Study 2.2. In this section readers can find the correlations between different measures in study 2.2 (see Table B), and a description of some additional measures not described in the Chapter itself.

Table B. *Correlation table Study 2.2*

Control Variable			**Women's ID**	**Feminist ID**	**Moderate action**
Efficacy	**Women's ID**	Correlation	1.000		
		Significance			
	Feminist ID	Correlation	**0.12**	1.000	
		Significance	0.193		
	Moderate action	Correlation	**0.13**	**0.26**	1.000
		Significance	0.143	0.004	
	Radical action	Correlation	**-0.10**	**0.34**	**0.22**
		Significance	0.261	0.000	0.013

Method.

As data for this study were collected as part of a larger experiment, there were several dependent variables that are not of central interest to the current study. These measures are described here, in the order in which they were administered.

Inclusion of the self in others scale. Two versions of this scale were used, as in Study 2.1, one asking about the distance between self and women as a group and the other asking about the distance between women and men (Schubert & Otten, 2002).

Perceived efficacy. Participants indicated to what extent they perceived their in-group as efficacious, using three items such as "I think women united can successfully defend their rights", rated on a 7-point scale (α=0.83). Perceived efficacy was measured as it has been shown to be an important predictor of collective actions (Van Zomeren, Spears, Fischer, & Leach, 2004).

Support for Feminist Goals. Attitudes to the feminist movement were measured with the global goals of feminism scale (Morgan, 1996), consisting of 10 items such as "Women should be considered as seriously as men as candidates for the Presidency of Spain" (α=0.56), rated on a scale of 1 to 7.

Affirmative action attitudes. Attitudes towards affirmative action aimed at improving the position of women were measured by 3 items (from Tougas et al, 1999; e.g., "If there are no affirmative action programs helping women in employment, they will continue to be unfairly treated"; α=0.63), rated on a scale of 1 to 7.

Study 2.3. In this section readers can find the correlations between different measures in study 2.3 (see Table C), and a description of some additional measures not described in the Chapter itself.

Table C: *Correlation table Study 2.3*

		Women's ID	Feminist ID	Femininity	Modern Sexism	Disadvantage	Hostile Sexism	Benevolent Sexism	Attitude Strength	Problematic stereotypes (pos descr)	Problematic Stereotypes (neg descr)	Problematic stereotypes (pos prescr)
Women's ID	Corr	1.000										
	Sign											
Feminist ID	Corr	**0.25**	1.000									
	Sign	0.001										
Femininity	Corr	**0.51**	**0.11**	1.000								
	Sign	0.000	0.142									
Modern Sexism	Corr	**0.13**	**0.66**	**-0.09**	1.000							
	Sign	0.085	0.000	0.251								
Disadvantage	Corr	**0.20**	**0.41**	**0.05**	**0.55**	1.000						
	Sign	0.006	0.000	0.508	0.000							
Hostile Sexism	Corr	**-0.004**	**-0.49**	**0.14**	**-0.59**	**-0.33**	1.000					
	Sign	0.952	0.000	0.056	0.000	0.000						
Benevolent Sexism	Corr	**0.36**	**-0.12**	**0.31**	**-0.21**	**-0.10**	**0.46**	1.000				
	Sign	0.000	0.098	0.000	0.004	0.182	0.000					
Attitude Strength	Corr	**0.15**	**0.77**	**0.02**	**0.64**	**0.36**	**-0.51**	**-0.15**	1.000			
	Sign	0.031	0.000	0.836	0.000	0.000	0.000	0.042				
Problematic stereotypes (pos descr)	Corr	**-0.13**	**0.24**	**-0.16**	**0.13**	**0.16**	**-0.22**	**-0.29**	**0.27**	1.000		
	Sign	0.074	0.001	0.036	0.085	0.031	0.008	0.000	0.000			
Problematic stereotypes (neg descr)	Corr	**-0.11**	**0.35**	**-0.17**	**0.34**	**0.20**	**-0.41**	**-0.41**	**0.39**	**0.59**	1.000	
	Sign	0.150	0.000	0.023	0.000	0.007	0.000	0.000	0.000	0.000		
Problematic Stereotypes (pos prescr)	Corr	**-0.16**	**0.27**	**-0.18**	**0.30**	**0.33**	**-0.35**	**-0.50**	**0.33**	**0.38**	**0.50**	1.000
	Sign	0.036	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Problematic Stereotypes (neg prescr)	Corr	**-0.06**	**0.21**	**-0.05**	**0.29**	**0.29**	**-0.27**	**-0.38**	**0.27**	**0.23**	**0.45**	**0.72**
	Sign	0.455	0.004	0.521	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000

Method.

Hiring task. In the hiring task, the instructions asked participants to imagine that a new female leader had been hired at a company they worked for, and that this woman would become their new department boss. Participants were then asked to evaluate a series of traits in terms of how important they would be for their new female leader to have. Items focused on warmth, competence and morality. This measure was designed to examine perceptions of stereotypes indirectly; more endorsement of stereotypes would lead to a preference for more stereotypical attributes. However, preliminary analysis of this measure showed that morality traits were valued much more highly than either warmth or competence traits. In fact, morality was valued so highly, that differences between the warmth and competence dimensions were obscured by it. For this reason, the interpretability of the results of this measure was limited and we do not report it in the main text.

Regulatory focus. Research has shown that individuals under promotion focus commit to collective action when it is likely that the objectives will be achieved. Individuals under prevention focus, however, saw collective action for social change as a moral obligation, and were less affected by the likelihood of success (Zaal, Van Laar, Ståhl, Ellemers, & Derks, 2012). Extending this reasoning to the gender context, high/high identifiers may adopt a promotion focus when considering gender issues: they understand the disadvantaged social position of women, but are quite satisfied on a personal level, and therefore would only "risk" engaging in collective action when it is likely that the objectives are reached. Conversely, distinctive feminists may adopt a prevention focus: they see striving for social change on gender issues as a moral obligation. This option was explored as an alternative to our central hypothesis. We measured regulatory focus, both dispositional, and in the context of gender issues. Dispositional regulatory focus was assessed with the Regulatory Focus Proverb Questionnaire (α=0.70, Van Stekelenburg, 2006). Participants rate the extent to which proverbs with promotion and prevention foci reflect the approach they take to life. Examples include "better be safe than sorry" (prevention), and "nothing ventured nothing gained" (promotion).

Alongside this dispositional measure of regulatory focus, we developed some items that reflect situational regulatory focus of statements, specific to the gender context. Six items (α=0.81) examined endorsement of feminist principles when they were framed as having either prevention goals (preventing sexism) or promotion goals (promoting gender equality). Another

five items (α=0.97) represented the objectives of (moderate) collective action as either preventive or promotion-focused (i.e. "drawing attention to the disadvantage faced by women" vs. "showing support for women's rights").

Attitude strength. We wished to exclude the alternative possibility that the interaction between identification with women and feminists affects attitude strength rather than content. Such an explanation would be counter to multiple identities approach, which distinguishes the subgroups based on content, rather than strength of identification. The measure of attitude strength was composed of 8 items (α=0.876, items adapted from Vonofakou, Hewstone, & Voci, 2007), such as "How often do you think about gender and its meaning?".

Results.

Hiring task. In the hiring task, participants were asked to rate the importance of several traits representing warmth, competence and morality, in terms of how important they would be for a new female leader in their company to have. There was a significant 3-way interaction between feminist identification, women's identification and dimension, $F(1, 185)=4.314$, $p=0.039$, such that the differences between these conditions are amplified as scores on the identification variables go up. Non-identifiers do not show significant differences between any of the dimensions ($F(1, 185)=1.71$, $p=0.193$), while high/high identifiers rate all dimensions differently ($F(1, 185)=25.31$, $p<0.001$, $\eta^2_{p=}$ 0.30).

These findings suggest that as identification goes up, opinions on the traits of female leaders become more pronounced, such that morality is considered most important, followed by warmth, followed by competence. The third measure of perceptions of stereotypes was the hiring task. We hypothesised that more endorsement of stereotypes would lead participants would give more importance to stereotypical traits in a woman. It was found that participants rated morality as the most important aspect of a female leader, followed by warmth, followed by competence. These effects were more pronounced as identification (with feminists and women) went up. The finding that warmth is considered more important than competence may reflect the fact that the measure stated that the female leader would become the participants' boss at work. As warmth traits serve communal functions focused on other-interest, while competence traits could be seen as more focused on self-interest (Abele &Wojciszke, 2007), participants' preference for warmth over competence may reflect a concern for one's own outcomes, rather than a desire for the leader to embody female stereotypes (warmth). That is, the

preference for warmth may not be related to the stereotypicality of this dimension. However, this explanation could not be tested directly in this study.

Regulatory focus. The first component of the regulatory focus measure, assessed dispositional regulatory focus through the RFPQ (Van Stekelenburg, 2006), to examine general preference for prevention and promotion focus. Results showed that, in general, participants reported more agreement with promotion focused items ($F(1, 185)=6.36$, $p=0.013$, $\eta^2_{p=}$ 0.03). Additionally, there was a main effect of women's identification ($F(1, 185)=4.46$, $p=0.036$, $\eta^2_{p=}$ 0.02), such that higher women's identifiers endorsed the statements more, regardless of their focus.

Endorsement of feminism was affected by a main effect of feminist identification, $F(1, 185)=57.31$, $p<0.001$, $\eta 2p= 0.24$, such that higher feminist identification lead to more endorsement of the aims of feminism, regardless of their prevention or promotion focus ($Fs<1.41$, $ps>0.24$). Additionally, there was a main effect of focus, such that participants in general perceived feminism as having a preventive focus (i.e. preventing women's disadvantage, rather than supporting women's rights), $F(1, 185)=18.21$, $p<0.001$, $\eta^2_{p=}$ 0.09.

Endorsement of gender-related collective action also showed a main effect of feminist identification, $F(1, 185)=79.97$, $p<0.001$, $\eta^2_{p=}$ 0.31, such that higher feminist identification increased endorsement of collective action. Again, there was a main effect of focus, $F(1, 189)=5.13$, $p=0.025$, $\eta^2_{p=}$ 0.03, such that participants endorsed more collective action when it focused on preventing women's disadvantage. Arguably, this effect of focus could be explained by the perceived seriousness of the issue at stake: the negatively framed collective action items may garner more support because preventing disadvantage is perceived as more important than providing support.

In sum, the hypothesis that the interaction between women's identification and feminist identification affects the regulatory foci adopted when thinking about gender issues was not supported.

Attitude Strength. Attitude strength was associated with feminist identification, $\beta=0.50$, $F(1, 185)=237.52$, $p<0.001$, such that higher feminist identification predicted stronger attitudes on gender issues. Crucially, the interaction between feminist identification and women's identification did not reach significance ($F<1$). Thus, there is no evidence that the interaction between women's identification and feminist identification produces differences in the strength of attitudes.

Study 2.4. In this section readers can find the correlations between different measures in study 2.4 (see Table D), and a description of some additional measures not described in the Chapter itself.

Method.

Hiring task. In the hiring task, the instructions asked participants to imagine that a new female leader had been hired at a company they worked for, and that this woman would become their new department boss. Participants were then asked to evaluate a series of traits in terms of how important they would be for their new female leader to have. Items focused on warmth, competence and morality. This measure was designed to examine perceptions of stereotypes indirectly; more endorsement of stereotypes would lead to a preference for more stereotypical attributes. However, as in Study 3, preliminary analysis of this measure showed that morality was valued so highly, that differences between the warmth and competence dimensions were obscured by the large effect it produced. For this reason, the interpretability of the results of this measure were limited and we do not report it in the main text.

Regulatory focus. The previous study measured regulatory focus generally, as well as regulatory focus when considering gender issues. The Regulatory Focus Proverbs Questionnaire used in the previous study (van Stekelenburg, 2006) was not affected by the manipulation and omitted in this study. The items focusing on feminism and collective action showed that feminists tended to agree with all statements, regardless of the regulatory focus it reflected. Therefore, in the current study these items were presented as forced choice. Participants were asked to select the option that reflected their opinions most closely, with on one end of the scale a preventively framed option (e.g. the aim of feminism is to prevent sexism) and at the other end of the scale a promotion-focused option (e.g. the aim of feminism is to promote gender equality). Using the statements as opposite scale anchors halved the number of items from 12 to 6, with 3 items focussing on the aims of feminism, and 3 items focusing on the objectives of collective action.

Attitude strength. This measure examined the alternative possibility that identification with women and feminists affects attitude strength rather than content. Such an explanation would be counter to the TGIF model, which distinguishes the subgroups based on content, rather than strength of identification. The measure of attitude strength was composed of 8 items (α=0.876,

items adapted from Vonofakou et al., 2007), such as "How often do you think about gender and its meaning?"

Results.

Effect of the manipulation. The manipulation exposed participants to the views of two different women on issues of gender equality, with one speaker being critical of gender stereotypes, and the other speaker endorsing stereotypes. Results showed that the pro-stereotype speaker was perceived more positively than the anti-stereotype speaker on all dimensions (warmth, intelligence, liking, agreement), $F(1,189)=94.36$, $p<0.001$, $\eta^2_{p=}$ 0.34. Additionally, there were main effects of feminist identification, $F(1,189)=15.79$, $p<0.001$, $\eta 2p=$ 0.08, and women's identification, $F(1,189)=5.16$, $p=0.024$, $\eta^2_{p=}$ 0.03, such that higher feminist identification and higher women's identification lead to more positive ratings being given, regardless of who the speaker is, and regardless of the dimension on which speakers are rated. Finally, an interaction between the speaker, the dimension on which the speaker was rated, and feminist identification ($F(1,189)=9.21$, $p=0.003$), showed that low feminists' ratings of agreement were less strongly affected by the content of the speakers' arguments than high feminist identifiers, $F(1,189)=4.50$, $p=0.035$, $\eta^2_{p=}$ 0.02.

In sum, participants gave more positive ratings to the pro-stereotype speaker than the anti-stereotype speaker; this preference for the pro-stereotype speaker was reflected particularly strongly in high feminists' agreement ratings. This is contrary to our hypothesis that distinctive feminists would agree more with the anti-stereotype speaker. One reason why feminists disliked the anti-stereotype speaker in this sample, may be that her arguments were framed quite prescriptively ("women should not behave according to stereotypes"). Findings from Study 3.3 have shown that women dislike prescriptions for women's behaviour, a finding which is confirmed in the current study (see below). Thus, feminists may have preferred the pro-stereotype speaker over the anti-stereotype speaker, because the arguments of the pro-stereotype speaker were more accepting of women's choices.

Hiring task. In the hiring task, participants were asked to rate the importance of several competence and warmth-related traits for a hypothetical female leader. Results showed that there was an interaction between feminist and women's identification, $F(1,189)=6.35$, $p=0.013$, $\eta^2_{p=}$ 0.03, such that non-identifiers placed less importance on a female leader having positive traits than other women did.

Positive traits also represented different dimensions, of warmth, com-

petence and morality. There was a main effect of dimension, $F(1,189)=17.27$, $p<0.001$, $\eta^2_{p=}$ 0.09, such that participants overall placed greatest importance on morality, followed by warmth, followed by competence.

Regulatory Focus. There were no significant effects of feminist or women's identification on regulatory focus (Fs<1).

Attitude Strength. As in Study 2.3, attitude strength was positively predicted by feminist identification, $F(1,189)=72.88$, $p<0.001$, such that feminist identifiers reported stronger gender attitudes than non-feminist identifiers. The interaction between feminist identification and women's identification did not reach significance (F<1).

Table D. *Correlation table Study 2.4*

		Women's ID	Feminist ID	Femininity	Modern Sexism	Disadvantage	Hostile Sexism	Benevolent Sexism	Attitude Strength	Gender differentiation	Problematic stereotypes (pos descr)	Problematic stereotypes (neg descr)	Problematic stereotypes (pos prescr)
Women's ID	Corr	1.000											
	Sign												
Feminist ID	Corr	**0.26**	1.000										
	Sign	0.000											
Femininity	Corr	**0.56**	**0.20**	1.000									
	Sign	0.000	0.007										
Modern Sexism	Corr	**0.15**	**0.50**	**0.10**	1.000								
	Sign	0.038	0.000	0.169									
Disadvantage	Corr	**0.27**	**0.43**	**0.24**	**0.44**	1.000							
	Sign	0.000	0.000	0.001	0.000								
Hostile Sexism	Corr	**-0.11**	**-0.50**	**-0.02**	**-0.39**	**-0.26**	1.000						
	Sign	0.152	0.000	0.772	0.000	0.000							
Benevolent Sexism	Corr	**-0.05**	**-0.31**	**0.08**	**-0.26**	**-0.11**	**0.82**	1.000					
	Sign	0.519	0.000	0.269	0.000	0.155	0.000						
Attitude Strength	Corr	**0.10**	**0.55**	**-0.05**	**0.57**	**0.37**	**-0.39**	**-0.28**	1.000				
	Sign	0.170	0.000	0.546	0.000	0.000	0.000	0.000					
Gender differentiation	Corr	**0.16**	**-0.07**	**0.12**	**-0.10**	**-0.15**	**0.13**	**0.13**	**-0.15**	1.000			
	Sign	0.031	0.085	0.091	0.197	0.042	0.074	0.079	0.041				
Problematic stereotypes (pos descr)	Corr	**-0.12**	**0.15**	**-0.14**	**0.19**	**0.13**	**-0.15**	**-0.12**	**0.18**	**-0.06**	1.000		
	Sign	0.116	0.037	0.052	0.008	0.077	0.048	0.120	0.014	0.432			
Problematic stereotypes (neg descr)	Corr	**-0.10**	**0.08**	**-0.04**	**0.09**	**0.04**	**-0.14**	**-0.23**	**0.03**	**-0.04**	**0.36**	1.000	
	Sign	0.172	0.289	0.590	0.224	0.559	0.060	0.002	0.692	0.604	0.000		
Problematic stereotypes (pos prescr)	Corr	**-0.02**	**0.15**	**-0.10**	**0.37**	**0.22**	**-0.29**	**-0.33**	**0.25**	**-0.18**	**0.26**	**0.32**	1.000
	Sign	0.808	0.046	0.175	0.000	0.000	0.000	0.026	0.001	0.014	0.000	0.000	
Problematic stereotypes (neg prescr)	Corr	**0.04**	**0.20**	**0.06**	**0.30**	**0.32**	**-0.20**	**-0.17**	**0.21**	**-0.09**	**0.14**	**0.30**	**0.70**
	Sign	0.604	0.007	0.448	0.000	0.007	0.007	0.021	0.005	0.201	0.051	0.000	0.000

Chapter 3

In this section, readers may find details of the studies described in Chapter 3. The section is divided into 4 sections, each providing details on a separate issue noted in the text. The first section provides an overview of the procedure of each study. The second section describes three outcome measures for which preliminary analyses showed some methodological problems, which hampered interpretation of results. Additionally, some measures that are described in the text were not affected by the manipulation, but did show some other significant effects. Those effects are described in section 3. The last section discusses findings specific to Study 3.1, which included 2 conditions that were not present in the other studies.

Additional measures. Aside from the measures described in the main text, each study included some additional measures that are described here, because preliminary analysis of these measures showed some methodological problems, which hampered interpretation of results. Study 3.1 included an AMP (Affect Misattribution Procedure) as a measure of collective self-esteem, and Study 3.3 included a story-writing task as a behavioural indicator of resistance. Additionally, Study 3.3 included a measure that was analysed together with other studies in a pooled analysis reported in Chapter 4. We briefly report the nature and results of these measures here.

Methods.

Collective Self-esteem. In Study 3.1, an AMP (Payne, Cheng, Govorun, & Stewart, 2005) assessed participants' implicit collective self-esteem. Participants rated 10 Chinese characters on how visually pleasing they found them. Each character was presented twice, once preceded by a female name prime (42 ms) and once preceded by a male name prime. Higher ratings of the characters preceded by female primes indicate higher collective self-esteem. The stimuli were pilot tested and selected based on similar ratings of pleasantness overall. That is, we aimed for all stimuli to have a comparable level of baseline pleasantness. However, when these stimuli were used in Study 3.1, preliminary analysis showed that not all characters were rated as equally pleasant. Some characters were rated as very pleasant and some as quite unpleasant; indicating that pilot testing had not been successful in identifying stimuli that had comparable baselines. This variance produced a large main effect on ratings of pleasantness, overriding possible effects of the gender of the prime on ratings of pleasantness. Therefore, results of this measure provided little scope for interpretation.

Stories task. In the stories task (adapted from Branscombe, Spears, Ellemers, & Doosje, 2002) included in Study 3, participants were asked to write two short stories about (1) a characteristic of themselves that they were proud of and (2) a characteristic of women as a group that they were proud of. This task was included to measure individual, rather than group-based, resistance responses. That is, after exposure to stereotypes, participants might wish to distance themselves from the in-group and write more words about their pride in their personal characteristics. Conversely, resistance on this task is indicated by a greater number of words written about pride in the group following implicit stereotypes. Participants were able to choose which story they wanted to write first. Results of this task were difficult to interpret due to the fact that there was a time limit of 10 minutes on this task. This was done to make sure the experiment took roughly the same amount of time for all participants (in view of possible decay over time for implicit priming effects). However, this meant that participants who spent a long time on the first story, had less time remaining for the second story. That is, some participants were cut off while writing the second story, and the number of words they had written could therefore no longer be used as an indicator of motivational processes. While the number of participants who were affected by this was small (N=11), we consider this problematic because precisely those participants who had written a lot during the first story (and presumably were motivated to complete the task), were the ones who were cut off.

Moral Choice Dilemmas task. Study 3.3 included a moral choice dilemma task to measure in-group bias in a more behavioural way. It consisted of 8 items, adapted from Thomson (1986), in which one person has to be sacrificed to save the lives of a larger group. Four of these were adapted so that the target person to be sacrificed was a man, in the other four it was a woman who had to be sacrificed. Results of this task are described in detail in Chapter 4.

Results.

Collective self-esteem. The measure of collective self-esteem included was affected by women's identification ($F(1,73)=8.50$, $p=0.005$), so that higher women's identifiers gave lower ratings of pleasantness for the Chinese characters. There was no evidence for an interaction between exposure condition, and feminist identification or women's identification ($F<1.65$, $p>0.20$). That is, there was no evidence for resistance.

Stories task. The number of words written about pride in the self was predicted by the 3-way interaction between feminist identification, wom-

en's identification and exposure condition ($F(1,249)=3.71$, $p=0.055$), so that non-identifiers wrote more words about their pride in themselves after exposure to counter-stereotypes compared to stereotypes ($M_{diff}=13.12$, $F(1,249)=3.88$, $p=0.050$). There were no significant effects of any of the predictors on words written about pride in the group (Fs<2.09, ps>0.14).

Additional Results. Here we report some additional findings for some of the measures described in the main text. Firstly, we describe the step-by-step breakdown of higher order interactions observed on the implicit measures. When breaking down the interactions, we describe only those lower-order effects that reached significance, effects that did not reach significance are not described here. Secondly, some measures did not show effects of the manipulation (which is reported in the main text), but other terms did reach significance. These findings are also described here.

Implicit threat experience. The implicit threat experience task (Studies 2 & 3) showed a 4-way interaction between exposure condition, feminist identification, type of target and direction of the response, which is described in the main text. Additionally, there was a marginal 5-way interaction between exposure condition, feminist identification, women's identification, direction of response and type of target ($F(1,37551)=3.26$, $p=0.071$), showing that the main effect of direction (approach vs avoidance) was less strong for non-identifiers and dual identifiers' responses to neutral targets in the stereotype condition ($F(1,37551)=3.02$, $p=0.082$). As this effect regarded neutral targets, we considered that scope for interpretation is limited.

Self-esteem. All Studies measured self-esteem. Results from the pooled analysis showed no effect ($F<1$) of exposure condition on self-esteem. Nevertheless, there was a main effect of feminist identification ($F(1,387)=8.69$, $p=0.003$, $d=0.15$), so that increased feminist identification was associated with higher self-esteem. Increased women's identification, on the other hand, was associated with reduced self-esteem ($F(1,387)=91.24$, $p<0.001$, $d=0.49$). In sum, there was no evidence that implicit stereotypes negatively affected self-esteem in these studies.

Explicit in-group bias.

Study 3.2. In Study 3.2, explicit in-group bias was measured through a hiring paradigm, to examine explicit associations of warmth and competence with the genders. There was no evidence that the exposure conditions affected the ratings of the candidates who appeared in the vignette, or men and women in general (Fs<2.17, p>0.13). Nevertheless, there were a number of

other effects that reached significance. Firstly, lower women's identification lead to higher ratings of the candidates (both female and male) who appeared in the vignettes ($F(1,96)=5.31$, $p=0.023$, d=0.14) an effect which was marginally stronger amongst distinctive feminists than non-identifiers, $F(1,96)=3.11$, $p=0.081$, $d=0.15$.

For ratings of men and women in general, there was again a main effect of women's identification so that lower women's identifiers gave higher ratings on all dimensions ($F(1,96)=9.98$, $p=0.002$, $d=0.31$). Moreover, an interaction between women's identification, dimension of the evaluation and gender being rated ($F(1,96)=4.47$, $p=0.037$) showed that compared to lower women's identifiers, higher women's identifiers rate women as more competent ($F(1,96)=4.53$, $p=0.036$, $d=0.22$). Similarly, a marginal interaction between feminist identification, and dimension of the evaluation affected ratings of men, such that compared to high feminist identifiers, low feminist identifiers rated men as more competent ($F(1,96)=3.74$, $p=0.056$, $d=0.18$). In sum, these results suggest that increased women's identification leads to more favourable evaluations of women, while increased feminist identification leads to less favourable ratings of men. However, as these results are independent of exposure condition, scope for further interpretation is limited.

Ambivalent Sexism. In Study 3.2, we examined whether exposure condition affected endorsed sexism, and found that exposure to implicit counter-stereotypes reduces endorsement of sexism, particularly amongst high feminist identifiers. These effects are described in the main text. Additionally, women's identification was related to more endorsement of hostile and benevolent sexism (Hostile: $F(1,101)=4.49$, $p=0.037$, d=0.24; Benevolent: $F(1,101)=3.47$, $p=0.066$, d=0.19). Feminist identification was marginally related to less endorsement of benevolent and hostile sexism (Benevolent: $F(1,101)=3.86$, $p=0.052$, d=0.14; Hostile: $F(1,101)=4.002$, $p=0.048$, d=0.29).

Study 3.1: The evaluative conditions. In Study 3.1, participants were divided over 4 conditions, giving 46 participants in the (counter-) stereotype conditions, and 46 participants in two additional conditions. In this section we describe the reasoning behind, and results of, the inclusion of these 2 additional conditions. Results for these conditions were less clear-cut than those for the stereotype conditions, and were not included in Studies 2 and 3. This meant that there was no possibility to include these conditions in the pooled analysis, and therefore they are described here.

Introduction. A stereotype can be said to have a stereotypical and an

evaluative dimension. The evaluative dimension refers to a positive or negative evaluation of the group, while the stereotypical dimension refers to the implied characteristics of the group. Often, both dimensions act together, resulting in a representation of the group which is both negative and stereotypical. However, there are cases in which the representation of the group is stereotypical, but positive. For instance, benevolent sexism expresses positive attitudes about women ("women are warm and caring") while at the same time reinforcing stereotypical views that legitimise inequalities between the sexes (Glick & Fiske, 1996). Thus, social identity threat may come from the stereotypical content of the threat, the implied negative evaluation of the group, or the combined effect of both dimensions. Amodio and Devine (2006) have shown that whether social identity threat is operationalized with a focus on stereotypical associations, or evaluative associations leads to different outcomes. Specifically, in Study 3.1, we expect that exposure to implicit stereotypes will elicit a stronger reaction than exposure to implicit identity threat on the evaluative dimension. While stereotypes reflect social structures, evaluative identity threat simply associates women as a group with negative valence. That is, stereotype exposure has an ecological validity than the evaluative dimension does not. In this way, we hope to show that stereotypes may lead to identity threat independent of their valence.

Method. The methods of Study 3.1 are described in the main section of the paper. However, the study included 2 conditions that were not present in the other studies, those conditions are described here. This study used a 2 (Threat: present vs. absent) x 2 (Dimension: stereotype vs. evaluative) between participants design to manipulate implicit social identity threat, creating 4 conditions, notably stereotype exposure, counter-stereotype exposure, which were also present in the others studies, as well as evaluative threat exposure, and counter-evaluative threat exposure. The evaluative threat and evaluative counter-threat conditions were not present in the other studies. Social identity threat was created by pairing female primes with negative pictures in 95% of trials, while the counter-threat condition associated female primes with positive pictures in 95% of trials. Stimuli consisted of 10 moderately positive and10 moderately negatively valenced pictures. The pictures were selected to be independent of gender stereotypes. Where human actors appeared in the picture (N=4), their gender was not visible (e.g., they were wearing a chemical jumpsuit) or several actors of both genders appeared (a crowd). Participants' task was to answer a question unrelated to the gen-

der-valence association that was primed, and report whether a person (N=4) or animal (N=6) appeared in the picture.

Results.

Implicit stereotypes. Examining the results of the evaluative conditions on implicit stereotypes showed an interaction between exposure condition, gender of the prime, type of target and feminist identification ($F(1,90)=3.88$, $p=0.049$) . Decomposition of the interaction showed that, after seeing positive associations with women, high feminist identifiers responded faster to warmth targets than competence targets when preceded by a female prime ($F(1,9932)=7.74$, $p=0.005$). Conversely, after seeing negative associations with women, high feminist identifiers responded marginally faster to competence targets than warmth targets when preceded by a female prime, $F(1,9932)=2.92$, $p=0.088$. There are two possible explanations of these findings. Firstly, it may be the case that while the latter effect is indicative of resistance to negative representations of women, the first effect instead is an effect of identity safety: only when women are presented positively do high feminist identifiers associate them with warmth. In spite of this, when considering these issues it must be kept in mind that power in this sample was modest, and therefore results must be interpreted with caution.

Implicit in-group bias. Examining the results of the evaluative conditions on implicit in-group bias showed an interaction between exposure condition, gender of the prime, type of target and women's identification ($F(1,9637)=4.57$, $p=0.033$) . Decomposition of the interaction showed that, after seeing positive associations with women, low women's identifiers are faster to classify positive targets when they are preceded by a female rather than a male prime ($F(1,9637)=11.27$, $p=0.001$). That is, low women's identifiers learn the associations they are exposed to. High women's identifiers on the other hand, show the opposite response: after seeing women represented positively (and men negatively) the classification of positive words is facilitated following male rather than female primes ($F(1,9637)=6.25$, $p=0.012$). One explanation for this finding may be that high women's identifiers object to the negative representation of men in this condition.

Explicit in-group bias. The evaluative threat conditions, feminist identification, and their interactions, did not affect explicit in-group bias (Fs<1.57, ps>0.21).

Mood. The evaluative threat conditions, feminist identification, and their interactions, did not affect mood (Fs<2.41, ps>0.12).

Self-esteem. The evaluative threat conditions did not affect personal self-esteem, either as a main effect (F<1) or in interaction with feminist and women's identification (Fs<1.54, ps>0.21). However, there was an interaction between women's and feminist identification (F(1,90)=6.38, p=0.014), showing that traditional women report lower self-esteem than other groups of women.

Collective Self-esteem. The evaluative threat conditions, feminist identification, and their interactions, did not affect collective self-esteem (Fs<2.59, p>0.11).

Discussion. A methodological aim of Study 3.1 was to distinguish between stereotypical and evaluative components of social identity threat, to examine which dimension drives possible effects. As expected, disentangling the two dimensions shows that the stereotype dimension and the evaluative dimension have different effects on responses (Amodio & Devine, 2006; Fazio et al., 1995). The effects produced by the evaluative conditions were less clear-cut than findings produced by the stereotype conditions. Additionally, the sample size in these conditions was low (N=22 per condition), and since the conditions were not included in other studies, power could not be boosted through pooled analysis.

Chapter 4

Alternative analysis. As an alternative to the repeated measures model we consider in the results section, we also considered a multilevel model, in which Sacrifice is a binary outcome per vignette (1= sacrificed, 0=not sacrificed). Vignette is included as a random factor to examine whether the vignettes produce differences in sacrificing behavior, but this term did not reach significance (F<2.013, p=0.126). Table E shows a direct comparison between the results of the repeated measures ANOVA, reported in the main text, and the results of the multilevel model. The simple effects reflect the effect of the stereotype versus counter-stereotype exposure on the evaluations of men.

Order of tasks. As the data presented here were collected as part of 2 larger studies, this section outlines the measures used in each of the two studies (see Table F for an overview). The measures of interest in this study are underlined in Table F, and described in the main text. Other measures are described below

Table E. Comparison of results of the repeated measures ANOVA to the multilevel model

	Results			
	RM ANOVA		**Multilevel model**	
	F-value	*p*-value	*F*-value	*p*-value
4-way interaction (Condition*GenderVictim*FemID*WomID)	8.10	$p = 0.005$	6.98	$p = 0.008$
Simple Effect for distinctive feminists	4.42	$p = 0.036$	3.80	$p = 0.051$
Simple Effect for dual identifiers	2.95	$p = 0.087$	2.25	$p = 0.113$
Simple Effect for non-identifiers	6.69	$p = 0.010$	8.40	$p = 0.004$
Simple Effect for traditional women	$F < 1$	n.s.	$F < 1$	n.s.

NB: The simple effects reflect the effect of the stereotype versus counter-stereotype exposure on the evaluations of men.

Table F. *Procedure of Studies 4.1 and 4.2*

Study 4.1	**Study 4.2**
Demographics	Demographics
Manipulation	Manipulation
Implicit measures Evaluative decision task Approach-Avoidance task	
Moral Choice Dilemma task	Moral Choice Dilemma task
Persistence	Persistence
Collective Action intentions	Explicit in-group bias
Mood	Mood
Identification with women	Identification with women
Identification with feminists	Identification with feminists
Debriefing	Debriefing

Other measures. The measures in Table F that are not underlined are described in this section.

Study 4.1.

Evaluative decision task. Study 4.1 included an evaluative decision task (Fazio, Jackson, Dunton, & Williams, 1995), which examined responses to positive and negative targets associated with the genders. The task consisted of 120 trials. Each trial presented a subliminal gender prime (i.e., male or female name) with forward and backward masks (100 ms), followed by a supraliminal target. Targets were positive (N=20) or negative (N=20) words without stereotypical connotations, such as 'corpse' or 'vacation'(adapted from Roefs et al., 2005). Participants were asked to classify targets as positive or negative, and analyses focused on the speed with which this decision was made. In this task, the facilitation of female-positive pairs, relative to male-positive pairs, following identity threat would be indicative of implicit in-group bias (de Lemus, Spears, Lupiañez, Moya, & Bukowski, 2016).

Approach-Avoidance task. In Study 4.1, approach and avoidance tendencies were assessed using an approach-avoidance task (De Houwer, Crombez, Baeyens, & Hermans, 2001). Participants direct a little stick-person to approach or avoid neutral and threatening word stimuli, and analyses focused on the speed with which this was done. The task consisted of 120 trials: 30 threat-approach trials, 30 threat-avoidance trials, 30 neutral-approach trials and 30 neutral-avoidance trials. The target words were selected to be unrelated to stereotypes. If avoidance of threatening stimuli is facilitated compared to approach of threatening stimuli, this indicates an implicit threat experience.

Collective action intentions. Study 4.1 included a measure of collective action intentions by asking participants to sign a petition to urge the relevant ministry to create policies to improve the position of women. As no explicit reference to gender had been made in the study up to this point, it was necessary, in introducing the petition, to make gender issues salient to participants.

Study 4.2.

Explicit in-group bias. Study 4.2 examined explicit in-group bias in the moral domain through a "bail-task". Participants have to determine the bail amount for 12 individuals who have been arrested for a variety of crimes. Gender of the individual in question was counterbalanced, and gender-stereotypicality of the crime was controlled for (e.g. violent crime). Lower bail amounts for women as opposed to men would signify in-group bias.

Measures present in both studies.

Persistence tasks. Both studies included measures of persistence. We distinguish competencies that are considered stereotypically feminine, such as verbal skills, and those that are stereotypically masculine, such as mathematics and spatial abilities (de Lemus et al., 2016; Steele, Spencer, & Aronson, 2002). Thus, a math task was used to reflect performance and persistence in a male-typical domain, while an anagram task taps a more stereotypical performance domain for women. The two tasks consisted of 10 questions each. If the participant did not know the answer to the question, they could skip the item. The difficulty of the items increased throughout the task, and the final item (unbeknownst to participants) was unsolvable. These measures yielded 1) a performance measure: number of items answered correctly, and 2) a persistence measure: time spent on the unsolvable item.

Mood. Both studies included a mood scale, which was created from a combination of the dejection/agitation scale (Higgins, 2001), and the PANAS (Watson, Clark, & Tellegen, 1988), resulting in a 28-item scale asking about mood (α=0.84). Participants indicated their response on 7-point Likert scale.

Chapter 5

Study 5.1. In this section readers can find a description of the pre-test of the stimuli used in the manipulation and implicit measures, and details of main effects of in-group identification on the explicit measures.

Method.

Pre-test of stimuli. A list of 40 stereotyped traits was created based on previous studies of stereotypes in Spain (Morales & Rodriguez-Bailón, 2004; Willis & Rodriguez-Bailón, 2008). A group of 67 students at the University of Granada indicated to what extent they thought the stereotypical targets to be a) positive versus negative, b) reflecting high or low competence and c) typical of the in-group versus the out-group. A list of 40 positive and negative targets related to the economic crisis was derived from media content. The pilot participants indicated to what extent they thought these targets a) reflected advantage or disadvantage, b) were associated with the economic crisis, and c) were associated with the in-group versus the out-group.

Aside from the selection of stimuli, we used the pre-test data to examine which targets participants perceived as typical of the in-group versus the out-group. Participants considered low competence (t=6.99, p<0.001) and crisis targets (t=29.14, p<0.001) to be more typical of the in-group than to the out-

group. This provides some preliminary evidence that participants are familiar with the supposed inter-group differences which form the basis of our manipulation.

Results.

Math task. Our hypotheses regarding the math task were not supported: there was no evidence for resistance on the math task. However, there were main effects of identification on both persistence (F(1,145)=3.69, p=0.057) and performance (F(1,145)=4.53, p=0.035), such that low identifiers perform better and persist longer than high identifiers.

Hiring task. The hiring task was designed to measure in-group bias indirectly, and asked participants to rate in-group and out-group job candidates in terms of competence, warmth and suitability for a job vacancy. Although the threat condition did not affect results (Fs<1.95, ps>0.21) There was a main effect of identification on ratings of warmth for the in-group candidate (F(1,145)=4.60, p=0.034): the in-group candidate was rated as more warm as identification with the in-group increases.

Mood. The main effect of threat condition did not reach significance for either positive mood or negative mood, and neither did the interaction between threat condition and identification (Fs<1). There was a main effect of identification on positive mood (F(1,145)=8.78, p=0.004), such that higher identifiers experienced more positive mood.

Collective Action. The hypothesised effect of threat condition did not reach significance on either moderate or radical collective action, and neither did the interaction with identification (Fs<1.22, ps>0.306). Nevertheless, there were main effects of identification on moderate (F(1,145)=3.81, p=0.053) and radical collective action (F(1,145)=7.14, p=0.008), such that high identifiers indicated more support for collective action that combats in-group disadvantage.

Study 5.2. In this section readers can find details of influence of in-group identification on the explicit measures.

Results.

Math task. When taking identification into consideration, the performance measure showed a marginal interaction between threat condition and identification (F(3,138)=2.55, p=0.059), such that low identifiers performed worse after exposure to the disadvantage condition than after exposure to the stereotype condition (M_{diff}= -0.98, F(1,138)=4.85, p=0.030) and also performed worse than high identifiers in the disadvantage condition (M_{diff}=0.997,

F(1,138)=7.74, *p*=0.007). This result suggests that low identifiers experience detrimental effects on their performance when they are exposed to the disadvantage condition. However, there was no evidence for resistance against implicit stereotypes.

Mood. As in Study 5.1, positive mood was affected by identification, such that high identifiers reported more positive mood (*F*(1,138)=6.32, *p*=0.013). Moreover, positive mood was affected by a marginal interaction between threat condition and identification (*F*(3,138)=2.62, *p*=0.053), such that overall positive mood was higher amongst high identifiers than low identifiers, but this difference was smaller in the disadvantage condition. The negative mood factor was not affected by identification, threat condition, or the interaction between them (*F*s<1.07, p*s*>0.361).

Explicit responsibility and legitimacy. There was a main effect of identification on both perceived legitimacy of the situation and perceived responsibility of the in-group. High identifiers found the crisis situation and its consequences for Spain less legitimate (*F*(1,138)=4.81, *p*=0.032), and the in-group less responsible (*F*(1,138)=10.84, *p*=0.002).

Collective Action. Moderate and radical collective action were not affected by either threat condition, identification, or the interaction between them (*F*s<1.79, *p*s >0.150).

Nederlandse Samenvatting

[Dutch summary]

Nederlandse Samenvatting

In een wereld die gekenmerkt wordt door sociale ongelijkheid, is het behoren tot sociale groepen niet altijd positief. Terwijl sommige groepen relatief bevoorrecht zijn, worden andere groepen achtergesteld en benadeeld. Achtergestelde groepen worden geconfronteerd met armoede, beperkte toegang tot onderwijs, en lagere levensverwachtingen (Creed et al., 2012; Pickett & Wilkinson, 2010; Siegrist & Marmot, 2004; Wilkinson & Pickett, 2008). Voorbeelden van achtergestelde groepen in onze eigen maatschappij zijn bijna alle etnische minderheden (Williams & Mohammed, 2009), vrouwen (Swim et al., 2001), religieuze minderheden (Strabac & Listhaug, 2008), de LGBTQI-gemeenschap (Herek, 2007), werklozen (Cozzarelli et al., 2001), lager-opgeleiden (Kuppens et al., 2017), daklozen (Cikara et al., 2010), mensen met psychiatrische diagnoses (Corrigan & Watson, 2002), mensen die zwaarlijvig zijn (Crandall, 1994) en ouderen (T. D. Nelson, 2004). Ook al verschillen de precieze sociale omstandigheden van deze groepen, wat hen verenigt is het feit dat leden van deze groepen op maatschappelijk niveau worden beschouwd als minderwaardig ten opzichte van leden van bevoorrechte groepen. Dit soort sociale devaluatie komt onder andere tot uitdrukking door middel van vooroordelen en discriminatie (Crocker & Quinn, 2000; Major & Schmader, 2001). Recente data van het Centraal Bureau voor Statistiek (2016) laat bijvoorbeeld zien dat kinderen met identieke testresultaten door hun leraren als minder intelligent worden beschouwd wanneer zij afkomstig zijn uit een arbeidersmilieu dan wanneer zij uit de middenklasse komen.

Wanneer iemand tot een groep behoort die door de maatschappij als minderwaardig beschouwd wordt, kan dit een bedreigende ervaring zijn. Hoe leden van achtergestelde groepen omgaan met zulke bedreigingen van hun sociale identiteit is de centrale vraag die ten grondslag ligt aan vele theorieën van intergroepsrelaties. Cruciaal voor dit proefschrift is het feit dat identiteitsbedreigingen kunnen ontstaan als gevolg van heel subtiele signalen, en zelfs onderbewust kunnen plaatsvinden (Barreto et al., 2010; Kray et al., 2001). Hoe leden van achtergestelde groepen omgaan met zulke impliciete bedreigingen van hun sociale identiteit is een kwestie die binnen bestaande theorieën tot dusverre geen aandacht heeft gekregen. Dit proefschrift behandelt dit onderwerp, en richt zich specifiek op de mogelijkheid dat men zich kan *verzetten* tegen bedreigingen van sociale identiteit, ook als die op onderbewust niveau plaatsvinden.

Uit onderzoek is gebleken dat sociale devaluatie van achtergestelde

groepen in Westerse samenlevingen steeds subtieler wordt (Pearson et al., 2009; Swim et al., 1995). Veranderingen in sociale normen betekenen bijvoorbeeld dat het tegenwoordig als onacceptabel gezien wordt om vooroordelen expliciet te uiten. Toch betekent dit niet dat de onderliggende processen ook verdwijnen. Onderzoek laat zien dat de processen die bijdragen aan sociale devaluatie en discriminatie, zoals stereotypering, kunnen plaatsvinden op onderbewust niveau (Blair, 2002; Cañadas et al., 2013; Devine, 1989). Dat wil zeggen dat gedrag en cognitie significant bevooroordeeld kunnen zijn, zonder dat de "dader" of het slachtoffer zich daarvan bewust zijn. Dit heeft tot gevolg dat leden van achtergestelde groepen, die het slachtoffer zijn van deze processen, bedreigingen van hun sociale identiteit ervaren zonder dat zij zich daar bewust van zijn. Een vrouw die over het hoofd gezien wordt voor een promotie op het werk, maar door haar buren gecomplimenteerd wordt met de opvoeding van haar kinderen, zal dit wellicht op expliciet niveau niet als stereotyperend ervaren. Toch kunnen zulke ervaringen op onderbewust niveau informatie overbrengen over haar geschiktheid voor bepaalde sociale rollen, in overeenstemming met sociale stereotypen.

Gelukkig heeft veel onderzoek aangetoond dat leden van achtergestelde groepen weerbaar zijn, en verschillende strategieën tot hun beschikking hebben om zich te verzetten tegen bedreigingen van hun sociale identiteit (Ellemers et al., 2002; Leach & Livingstone, 2015; Major & Eliezer, 2011). Zo kunnen leden van achtergestelde groepen gebruik maken van *social creativity* door bedreigende informatie op positieve manier te herinterpreteren (bijv. "we zijn misschien arm, maar wel gelukkig", Glick & Fiske, 2001; Kay & Jost, 2003; Becker et al., 2012). Op deze manier kunnen leden van achtergestelde groepen een positief beeld van hun sociale groep behouden. Wanneer bedreiging van sociale identiteit onderbewust plaatsvindt, echter, lijken de mogelijkheden voor verzet en weerbaarheid af te nemen. Impliciete bedreigingen van sociale identiteit zijn moelijker te herkennen en moeilijker om direct aan te pakken, en onderzoek suggereert dat dit weerbaarheid ondermijnt (Kray et al., 2001; Major et al., 2003). Er is bewijs dat blootstelling aan impliciete stereotypen leidt tot conformiteit in plaats van verzet (Chen & Bargh, 1997; Kray et al., 2001). Met andere woorden, eerder onderzoek suggereert dat weerbaarheid tegen identiteitsbedreiging maar tot op zekere hoogte mogelijk is: zodra de bedreiging subtieler of zelfs impliciet is, wordt weerbaarheid verminderd.

In dit proefschrift onderzoeken wij de hypothese dat leden van achterg-

estelde groepen zich toch kunnen verzetten tegen onderbewuste identiteitsbedreigingen. Deze centrale hypothese komt voort uit onderzoek dat heeft aangetoond dat impliciete cognitie meer geavanceerd is dan tot nu toe werd aangenomen. Eerder werd gedacht dat impliciete informatie waargenomen werd, maar dat actieve interpretatie en evaluatie beperkt is. In de laatste jaren is er echter steeds meer bewijs dat processen zoals motivatie een grote invloed hebben op de verwerking van, en reacties op, impliciete informatie (Glaser & Knowles, 2008; Moskowitz & Li, 2011). Zulke bevindingen suggereren dan leden van achtergestelde groepen op actieve, doelgerichte wijze kunnen omgaan met impliciete bedreigingen van hun sociale identiteit. Zo bezien kan verzet tegen impliciete identiteitsbedreiging vergeleken worden met weerbaarheid in het lichamelijk immuunsysteem, dat ziekte voorkomt zonder noodzaak voor bewuste gewaarwording (vanDellen et al., 2011). Door te bestuderen of men zich kan verzetten tegen impliciete identiteitsbedreigingen willen wij meer inzicht krijgen in weerbaarheid onder leden van achtergestelde groepen, wanneer zij geconfronteerd worden met subtiele signalen van minderwaardigheid, vooroordelen en stereotypering.

Samenvatting van bevindingen.

In vijf empirische hoofdstukken willen wij aantonen dat verzet tegen impliciete identiteitsbedreiging niet alleen mogelijk is, maar genuanceerd, en daarmee laten zien dat leden van achtergestelde groepen weerbaarder zijn dan tot nu toe werd aangenomen. Wij testen dit idee in de context van genderidentiteit (Hoofdstukken 2, 3, 4), nationale identiteit (Hoofdstuk 5), en regionale identiteit (Hoofdstuk 6).

Als inleiding op de centrale vraag of vrouwen zich kunnen verzetten tegen impliciete bedreigingen van genderidentiteit (Hoofstukken 3 en 4) onderzoekt Hoofdstuk 2 hoe vrouwen denken over hun lidmaatschap in de sociale groep “vrouwen”. We zijn specifiek geïnteresseerd in de factoren die voorspellen in hoeverre vrouwen van mening zijn dat hun groep op maatschappelijk niveau achtergesteld en als minderwaardig beschouwd wordt. De resultaten laten zien dat zowel feministische identiteit, als identificatie met vrouwen in het algemeen hierin een rol spelen. In de volgende hoofdstukken richten wij ons op de vraag hoe vrouwen reageren als zij geconfronteerd worden met *impliciete* signalen van devaluatie. Resultaten laten zien dat verzet tegen zulke impliciete identiteitsbedreiging inderdaad mogelijk is. Verzet tegen impliciete identiteitsbedreiging verschillende vormen kan aannemen, zoals meer positieve benadering van de eigen groep (*ingroup favouritism*)

of meer negatieve benadering van de andere groep (*outgroup derogation*). Dit wil zeggen dat, wanneer men geconfronteerd wordt met impliciete informatie die het positieve beeld van de groep bedreigt, men probeert de positieve groepsidentiteit te verdedigen door positievere associaties te maken met hun eigen groep, maar ook op meer indirecte wijze door negatievere associaties te maken met de *out-group*. Naast zulke evaluatieve reacties kan verzet tegen impliciete identiteitsbedreiging kan ook door gedrag naar voren komen. Zo liet Hoofdstuk 3 zien dat vrouwen die blootgesteld worden aan impliciete identiteitsbedreiging door middel van stereotypen, zich hiertegen kunnen verzetten door zich meer in te spannen in contra-stereotypische domeinen. Met andere woorden: impliciete identiteitsbedreiging door stereotypen motiveert hen om beter hun best te doen in contra-stereotypische domeinen, en zo stereotypen te weerleggen. In lijn met de bevindingen van Hoofdstuk 2 lieten Hoofdstukken 3 en 4 zien dat zulk verzet tegen impliciete identiteitsbedreiging afhankelijk is van identificatie met feministen en met vrouwen in het algemeen: verzet kwam alleen voor onder vrouwen die zich sterk identificeren met feministen, maar niet met vrouwen in het algemeen (een groep die wij hier "*distinctive feminists*" noemen).

Hoofdstuk 5 repliceert de bevindingen van Hoofdstukken 3 en 4 in de context van nationale identiteit. Spaanse proefpersonen verzetten zich tegen impliciete bedreiging van hun nationale identiteit door middel van *ingroup favouritism* en *outgroup derogation.* Het laatste hoofdstuk (Hoofdstuk 6), geeft een eerste indicatie van de rol van chronische bekendheid met de bedreigende context als randvoorwaarde voor verzet tegen impliciete identiteitsbedreiging. Met andere woorden: wanneer men vaker wordt blootgesteld aan identiteitsbedreiging en chronisch bekend raakt deze ervaring, ontwikkelt zich een bepaalde weerbaarheid, die ervoor zorgt dat men zich kan verzetten wanneer zij geconfronteerd worden met impliciete vormen van die bedreiging.

Conclusie.

Het voornaamste doel van dit proefschrift was te onderzoeken of leden van achtergestelde groepen zich kunnen verzetten tegen bedreigingen van hun sociale identiteit die op impliciet niveau plaatsvinden. Gedurende de laatste decennia is het steeds verder duidelijk geworden dat veel sociale processen belangrijke impliciete componenten hebben (Bargh et al., 2001; Blair, 2002; Devine, 1989). Toch is men pas recentelijk begonnen te bestuderen of (en hoe) bestaande theorieën van sociale relaties ook op impliciet niveau toepasbaar zijn (Lemus et al., 2013; Kray et al., 2001; Ramos et al., 2015). Van

bijzonder belang voor dit proefschrift is het feit dat het tot voor kort leek alsof leden van achtergestelde groepen zich niet kunnen verzetten tegen identiteitsbedreigingen die op onderbewust niveau plaatsvinden, en in plaats daarvan gedwongen worden hun achtergestelde positie te accepteren (Barreto et al., 2010; Kray et al., 2001). In dit proefschrift hebben wij aangetoond dat verzet tegen onderbewuste identiteitsbedreiging toch mogelijk is, en dat zulk verzet verschillende vormen kan aannemen. De bevindingen van dit proefschrift ondersteunen theorieën van intergroepsrelaties die beargumenteren dat leden van achtergestelde groepen hun achtergestelde positie kunnen aanvechten om uiteindelijk sociale verandering te bewerkstelligen. Onze bevindingen bieden ondersteuning voor *Social Identity Theory* (Tajfel & Turner, 1979; Spears et al., 2001; Ellemers et al., 2002) in het bijzonder, aangezien ze aantonen dat verzet tegen impliciete devaluatie kan voortkomen uit identiteits-overwegingen. Zo vormt dit proefschrift een belangrijke stap in het toepassen van *Social Identity Theory* in het impliciete domein. Door aan te tonen dat men zich kan verzetten tegen impliciete identiteitsbedreigingen, toont dit proefschrift bovendien aan dat leden van achtergestelde groepen weerbaarder zijn dan tot nu toe werd gedacht.

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